EFFECT OF INDIVIDUALIZED CURRICULAR ACCOMMODATIONS INCORPORATING STUDENT INTEREST AND THE IMPACT ON THE MOTIVATION AND OCCURRENCE/NONOCCURRENCE OF DISRUPTIVE BEHAVIOR DISPLAYED BY STUDENTS WITH EMOTIONAL/BEHAVIORAL DISORDERS

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As a result of the reauthorization of the Individuals with Disabilities Education Act of 1997, schools must now consider positive behavioral interventions and strategies to address problem behavior of students with Emotional/Behavioral Disorders (E/BD). Given the poor behavioral, academic, and social outcomes for these students, there is a compelling need to identify effective, proactive interventions. Current literature has well established the ineffectiveness of traditional, punitive, and consequence-laden strategies to deal with behaviors. Research has shown the manipulation of antecedent stimuli, in the form of curricular adaptations, can provide a positive, proactive means of managing behavior. Specifically, curriculum modifications, based on student interest, are proposed as a positive, proactive strategy used to manipulate antecedent stimuli to improve the behavior of students with E/BD.

The purpose of this study was to investigate the manipulation of antecedent stimuli through the implementation of individualized, curricular adaptations, based on student interest, to reduce the problem behavior of students exhibiting disruptive behaviors. A second purpose was to explore the effect of those adaptations on the behavior motivation of students with E/BD.

In this study, curriculum modifications based on student interest were used to reduce disruptive behavior, increase desirable behavior, and effect change in the motivation for problem behavior among four elementary school boys with E/BD. Use of an ABAB reversal design, including interval data collection, and the use of a behavior rating scale and a motivation assessment scale were used to establish baseline data and determine effectiveness of the intervention. Results indicate that each student demonstrated a reduction in disruptive behavior, an increase in desirable behavior, and changes in motivation for behavior.

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CHAPTER 1

INTRODUCTION

> The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew and act anew. We must disenthrall ourselves (Abraham Lincoln, December 1, 1862, Annual Message to Congress).

In complex and trying times, educators are now faced with and required to address serious problem behaviors in public school settings (Colvin, Sugai, & Patching, 1993). Although approaches to managing behaviors have been the focus of educators for some time (Clarke et al., 1995), the long-standing assumption, or "dogma" has been that intense, intrusive procedures are needed to manage these problems. Recently, however, a sweeping movement in favor of positive support strategies has emerged (e.g., Colvin et al., 1993; Clarke et al., 1995; Dunlap & Fox, 1999; Horner et al., 1990; Sugai, 1996; Warger, 1999).

With the reauthorization of the Individuals with Disabilities Education Act of 1997, came the mandate that schools must now consider, when appropriate, strategies, including positive behavioral interventions, strategies, and supports to address problem

behavior (IDEA, 1997 Section 614(d)(3)(B)(i)). Positive behavioral supports utilize functional behavioral assessment to identify nonintrusive, preventative and instructional procedures geared to the individual characteristics and needs of a child (Clarke et al., 1995; Foster-Johnson & Dunlap, 1993; Sugai, Lewis-Palmer, & Hagan, 1998). The last decade has brought refinement of these procedures for managing behavior.

One particular approach is the manipulation of antecedent stimuli, such as instructional and curricular variables (Dunlap & Kern, 1993). A number of researchers (e.g., Dunlap, et al., 1993; Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991; Kern, Childs, Dunlap, Clarke, & Falk, 1994) have conducted research in this area while extending it to include students with emotional/behavioral disorders (E/BD). In these studies, behavioral interventions were primarily prevention based, positive curricular adaptations.

Of particular interest has been the use of curricular adaptations incorporating individual preference. Cooper and colleagues (1992) showed that stimuli based on individual preference could be used to facilitate learning and task performance. In addition, Clarke and colleagues (1995) added support by showing that student interests could be identified and used to modify curriculum so as to improve disruptive behavior of students with E/BD.

A key to fostering an appreciation for learning and engagement in learning is catching the interest of students and holding it (Bergin, 1999). Interest in learning, motivation to learn, and behavior motivation (Durand & Crimmins, 1992) are essentially overlapped (Bergin, 1999). By identifying student interest, instruction can be adapted to reflect those interests. Munk and Repp (1994) have shown that instructional strategies

can be used to promote desirable behavior and reduce disruptive behavior in the educational context (Clarke et al., 1995). A number of researchers (e.g., Dunlap et al., 1993; Dunlap et al., 1991) have extended the research to include students with E/BD.

It is no secret that students with E/BD face almost insurmountable odds in achieving educationally and socially (Steinberg & Knitzer, 1992). If students with E/BD are to have any chance at success, we must look at what we teach, how we teach it, and how children interact with the curricula materials. These studies have demonstrated that curricular interventions can produce significant and often lasting reductions in undesirable behavior in the classroom (Clarke et al, 1995; Dunlap & Childs, 1996; Kern et al., 1994)

Purpose of the Study

The purpose of this study was to investigate the manipulation of antecedent stimuli through the implementation of individualized, curricular adaptations, based on student interest, to reduce the problem behavior of students exhibiting disruptive behaviors. A second purpose was to explore the effect of those adaptations on the behavior motivation of students with E/BD. Five research questions guided this study:

Research Question #1

Do individualized, curricular accommodations developed according to student interest, have an impact on the occurrence of disruptive behaviors, as measured by an ABAB reversal design analysis?

Research Question #2

Do individualized, curricular accommodations developed according to student interest,

have an impact on the nonoccurrence of disruptive behaviors as measured by an ABAB reversal design analysis?

Research Question #3

Do individualized, curricular accommodations developed according to student interest, have an effect on the occurrence of desirable behaviors as measured by an ABAB reversal design analysis?

Research Question #4

Do individualized, curricular accommodations developed according to student interest, have an effect on the nonoccurrence of desirable behaviors as measured by an ABAB reversal design analysis?

Research Question #5

Do individualized, curricular accommodations developed according to student interest, have an effect on motivation of student behavior as measured by the Motivation Assessment Scale (MAS; Durand & Crimmins, 1992)?

Significance of the Study

Although research has been conducted which suggests that behavior can be improved by incorporating student preference into curricular activities (e.g., Dyer, Dunlap, & Winterling, 1990; Foster- Johnson, Ferro, & Dunlap, 1994; Koegel, Dyer, & Bell, 1987), most studies have been limited to students with intellectual disabilities. Recently, some researchers (Clarke et al., 1995; Penno, Frank, & Wacker, 2000) have extended this line of investigation to other populations. Specifically, Clarke et al. (1995) demonstrated that curricular modifications based on student interest could serve to reduce

disruptive behaviors in some students with E/BD. Other researchers (e.g., Carr & Punzo, 1993; Hogan & Prater, 1993; Penno, Frank, & Wacker, 2000) have assessed the relationship between academic performance and inappropriate behavior of students with E/BD. Penno and Wacker (2000) found that instructional modifications designed to assess academic performance also reduced behavior problems, suggesting that in some cases, academic performance and behaviors can be remediated through the use of similar adaptations and strategies.

This study produced data that contributes to the growing body of literature supporting curricular adaptations as components in positive behavioral support programs (Clarke et al., 1995; Dunlap & Kern, 1993; Horner, Sprague, & Flannery, 1993; Munk & Repp, 1994). Use of functional behavioral assessment to identify preventative and instructional procedures geared to individual interests was further supported. This study extended research related directly to behavior management of students with E/BD. Data from this study also provided support for the influence of antecedents as variables contributing to problem behavior and serve to suggest that curriculum planning and instructional strategies are and should be integrally related to positive behavioral supports.

Limitations

A number of limitations in this study warrant discussion. Due to the design of the study, a small sample was used. Although the interpretation of results was limited by a small sample, current results considered within the context of existing literature show that curricular adaptations used as a stand-alone are a practical, effective classroom

instructional strategies to be used with elementary-aged students with E/BD. Efforts were made to compensate and strengthen the internal validity by strict adherence to the single-subject design using reliable observation, repeated measures, and use of an ABAB reversal design (Gall, Borg, & Gall, 1996).

A second limitation of the procedure used in this study was that the interventions were completed over a relatively short period of time and were implemented late in the semester. It is also possible that factors outside the scope of the study (e.g., end of school, events during the rest of the school day, events during lunchtime which preceded the observation time) may have influenced the results.

In addition, inferences drawn from this study could be limited by the nature of the group (i.e., all students identified as E/BD). Generalizability of the results to students from different age, ethnic, and disability groups may be limited.

Accommodations cannot be generalized from one student to another, thus modifications reflecting student interests must be individually determined (Clarke et al., 1995). Student interests may change over the course of any study, which may result in different data being obtained. In addition, it is possible that different results might be obtained if the original functional assessment data were erroneous.

Definition of Terms

Desirable behavior: Engagement in an academic task. A student is judged to be engaged when a student exhibits compliance with teacher instruction, eyes are directed toward material or eyes are directed toward teacher during verbal instruction or when appropriate (Clarke et al., 1995).

Disruptive behavior: Inability to maintain task engagement, talking out without staff permission, excessive off-task behavior, noncompliance, and inability to complete assignments. Disruptive behavior will be recorded when a student exhibits one of the listed behaviors which interferes with classroom activities (Clarke et al., 1995).

Emotional/ Behavioral Disorder (E/BD): Refers to individuals who are identified under the Individuals with Disabilities Education Act (1997) and under the law, exhibit one or more of the following characteristics over a long period of time, and to a marked degree, which adversely affects educational performance: (a) an inability to learn that cannot be explained by intellectual, sensory, or health factors; (b) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) inappropriate types of behaviors or feelings under normal conditions; (d) a general pervasive mood of unhappiness or depression; or (e) a tendency to develop physical symptoms, pains, or fears associated with personal or school problems. The term does not include children who are socially maladjusted, unless it is determined that they are emotionally disturbed. (45 C.F.R. 121a.5[b][8][1978])

Extrinsic motivation: Undertaking an activity to obtain some reward or avoid some punishment external to the activity (Lumsden, 1994; Raffini, 1996)

Interest-based assignment: Academic subject matter, revised to incorporate each of a student's identified interests. Interesting assignments requires the same response topographies and address the same objectives as the standard assignments (Clarke et al., 1995).

Intrinsic motivation: Undertaking an activity for its own sake, enjoyment provided, learning, or feeling of accomplishment (Lumsden, 1994; Raffini, 1996).

Motivation: For the purposes of this study, motivation has to do with a student's desire to participate in the learning process and concerns the reasons or functions related to behaviors of involvement or uninvolvement in academic activities (Durand & Crimmins, 1992; Lumsden, 1994).

Standard assignment: Academic tasks associated with problem behavior during assessment phase (Clarke et al., 1995). Assignment or task originally created and executed by teacher.

This study was designed to examine the use of instructional modifications as tool in designing behavioral interventions. Answers to the research questions were secured through interval data collection as well as the use of a behavior rating scale and a motivation rating scale. The study was based on the belief that curricular adaptations based on student interest would decrease disruptive behavior, increase desirable behavior, and effect the motivation for behavior.

CHAPTER II

REVIEW OF THE LITERATURE

The literature base established for this review was located following an extensive search of available electronic and print resources. Computerized searches were conducted through the Educational Resources Information Center (ERIC) database of journals, books, and documents, the Psychological Abstracts, and Dissertation Abstracts International (DAI) databases. Searches were also conducted through OCLC FirstSearch, PsychLit, and the Education Index. Key search terms, included, but were not limited to: student interest, student preference, curriculum, instructional design, instructional strategies, adaptations, modifications, functional behavioral assessment, positive behavioral support, data collection, data analysis, videotape recording, interventions, and motivation. Terms were used in a variety of combinations, to identify literature which examined similar issues. In addition, extensive hand searches were conducted in the University of North Texas Library and the University of Texas at Arlington Library. The focus of the review includes the years 1959 through 2000.

This review of pertinent literature is organized into six areas: (a) students with emotional/behavioral disorders (E/BD), (b) current school-based instructional and behavioral interventions, (c) functional behavioral assessment and positive behavioral supports, (d) curricular adaptations, (e) student interest, and (f) motivation, academics,

and behavior.

Students with Emotional/Behavioral Disorders

Students with E/BD face incredible odds, both educationally, behaviorally, and socially (Steinberg & Knitzer, 1992). Recent reports from the National Longitudinal Transition Study (Wagner, 1991; Wagner, 1995; Wagner, D'Amico, Marder, Newman, & Blackorby, 1992) confirm that students with E/BD have poorer outcomes than many of the disability groups. They are less likely to secure and hold a job and will make less money if and when they do graduate from school. Academically, students with E/BD have lower grade point averages than their peers and experience over a 50% dropout rate (U.S. Department of Education, 2000). Students with E/BD bring to school each new year, a history of failure and continue to function below grade level (Steinberg & Knitzer, 1992). Fifty percent of students with E/BD failed one or more courses in the most recent school year and over two-thirds failed grade level competency exams (U.S. Department of Education, 1995).

Unfortunately, these disturbing reports on academic and lifelong outcomes for students with E/BD are only compounded by news that few programs for students with E/BD are educationally productive (Steinberg & Knitzer, 1992). Teachers, administrators and support staff are under increasing pressure to address the problems effectively (Colvin, Sugai, & Patching (1993). The common reaction has been to invest more time, money, and personnel in an effort to increase skills. Unfortunately, there has been little success in linking research with classroom practice, although validated research exists (Peacock Hill Working Group, 1991; Steinberg & Knitzer, 1992; Wheby, Symons, &

Canale, 1998; Wheby, Symons, & Shores, 1995).

Although there has been some concern over the lack of published studies investigating interventions to specifically improve academic skills (Gunter & Denny, 1998; Ruhl & Berlinghoff, 1992), there is abundant literature available for improving student behavior, which can impact overall outcomes for students with E/BD (e.g., Dunlap & Fox, 1999; Sugai & Colvin, 1997).

In 1996, Dunlap and Childs reviewed and documented literature from 1980-1993, which dealt with empirically validated teaching strategies designed specifically to improve academic, behavioral, and social outcomes for children and youth with E/BD. A number of studies have demonstrated the positive effects of parent training, social skills, and classroom management strategies. Teachers have at their disposal, multiple options for interventions to address problem behaviors displayed by children (Alberto & Troutman, 1995).

Time and again, however, research has documented that empirically validated, effective, practices are not employed regularly in classrooms for students with E/BD (Gunter & Denny, 1999; Meadows, Neel, Scott, & Parker, 1994; Peacock Hill Working Group, 1991; Steinberg & Knitzer, 1992; Wheby et al., 1998; Wheby et al., 1995). For as yet unknown reasons, educators often resist empirically validated, sound practices (Walker, et al., 1998). For some teachers, it may be that the capacity to select and modify interventions to meet individual needs may not be well established (Sugai & Colvin, 1997). Traditional strategies have not proven a widespread success, yet Foster-Johnson and Dunlap (1993) suggest that traditional strategies based on the use of consequence can

improve the behavior of many students, but simply may be insufficient as a stand-alone intervention. Despite the reasons, there remains an unfortunate impact on the classroom and poor outcomes for students. With poor outcomes, there follows a criticism of poor strategies currently in use (Peacock Hill Working Group, 1991; Wagner, 1995).

School-based Interventions

According to a comprehensive study of programs for students with E/BD (Knitzer, Steinberg, & Fleisch, 1990) and a national survey of special education directors (Groesnick, George, George, & Lewis 1991), few significant differences have been found between the instructional and behavioral strategies and the practices in programs for E/BD and those of the regular classroom. The strategies and procedures employed by most teachers have been those based on learning theory (Fox, Conroy, & Heckaman, 1998). A learning theory is a systematic, integrated way of looking at the nature of processes, whereby people relate to their environments so that they enhance their ability to use both themselves and their environment more effectively (Bigge, 1982).

Twentieth century learning theory has largely been based on two theories: S-R (*stimulus response*) conditioning or *behaviorism* and Gestalt-field (*cognitive*). Use of the S-R learning theory may be due, in part to the already validated effectiveness in the reduction of inappropriate behavior and teaching of social skills (Fox et al., 1998). Although effective, some behavioral procedures have their limitations, as procedures do not always generalize from student to student. We do know that students with E/BD require individualized interventions that are specially designed (Sprague, Sugai, & Walker, 1998; Sugai & Colvin, 1997).

Current Instructional Strategies

Literature reflects that curriculum, instruction, and associated variables have been found to influence challenging behavior (Clarke et al., 1995; Foster-Johnson & Dunlap, 1993). Task assignments, levels of difficulty, interest, and preference are frequently linked to behaviors in the classroom. The authors also noted a number of other instructional factors associated with problem behavior: delivery of instruction, interactions of other students, degree of teacher attention and proximity, presence of extraneous stimuli, relevance of curricular content, and characteristics of the educational setting (Clarke, et al., 1995). Of particular importance, considering that behavior management has traditionally been a system controlled by teachers (McCadden & Swenseid, 1997; Martin, 1997) is that a student's ability to control or predict the sequence of activities may be influential (Foster-Johnson & Dunlap, 1993). Utilizing instructional skills already possessed by the staff can be used as a preventative behavioral management tool (Colvin et al., 1993). When used appropriately, effective teaching strategies will foster and promote both academic, social, and behavioral success (Lewis, Heflin, & DiGangi, 1991).

Traditional Behavioral Strategies

With general and special education remaining a system controlled by teachers (McCadden & Swenseid, 1997; Martin, 1997), the assumption has been for some time, that intense, intrusive procedures are needed to manage behavior problems (Clarke, et al., 1995). Programs for students with E/BD have relied heavily on extrinsic rewards and punishment (Knitzer et al., 1990). The focus has not been on internal and external

determinants, but on the characteristics of the behavior (Gable, 1996). As a result, contingency models of reinforcement, social reinforcement, and behavioral contracts have been the primary focus. Some researchers in the field consider interventions based solely on these extrinsic incentives and consequences to be coercive (e.g., Dunlap et al., 1994; Knitzer et al., 1990; Kohn, 1996; Steinberg & Knitzer, 1992). In fact, the literature has supported the idea that behavioral interventions used for the reduction of inappropriate behavior and which emphasize control, have had limited effectiveness (Knitzer et al., 1990; Martin, 1997).

An additional concern is the excessive use of teacher- controlled reward systems, which have also been shown to decrease a students' intrinsic motivation (Ames & Ames, 1989; Nichols, 1996). Further, when traditional methods of classroom systems of behavior management fail, students may be exposed to further interventions that may mean more restrictive placement and medication trials (Dunlap, Kern-Dunlap, Clarke, & Robbins, 1991). As a result, intervention practices employed within programs for students with E/BD have been criticized due to poor outcomes.

Preventative Measures

The last decade has brought a sweeping movement in favor of positive support strategies (e.g., Clarke et al., 1995; Colvin et al., 1993; Dunlap & Fox, 1999; Horner et al., 1990; Sugai & Colvin, 1997; Warger, 1999; Wlodkowski, 1981). Due to the reauthorization of the Individuals with Disabilities Education Act of 1997, schools are now mandated to consider, when appropriate, strategies, including positive behavioral support (PBS) and intervention strategies to address behavior that impedes the child's

learning or the learning of others (IDEA, 1997 Section 614(d)(3)(B)(i)). PBS utilizes functional behavioral assessment (FBA) to identify nonintrusive, preventative, and instructional procedures geared to the individual characteristics and needs of students (Clarke et al., 1995; Foster-Johnson & Dunlap, 1993; Nelson, Mathur, & Rutherford, 1999; Sugai & Colvin, 1997). Now mandated, both PBS and FBA will play a significant role in the education of students with E/BD (Nelson et al., 1999). Refinement of procedures for managing behavior in recent research has focused not on traditional, consequential forms of behavior management, but on nonaversive, preventative, positive strategies (Munk & Repp, 1994; Sugai & Colvin, 1997). Preventative behavior management is based on the belief that if effective preventative procedures are used, desirable outcomes will result (Munk & Repp, 1994).

Research on PBS has found that it is widely applicable to students with impeding behaviors, is effective in reducing problem behavior by 80%, and is already contributing to the knowledge base of using assessment to improve the learning environment (Carr et al., 1999; Warger, 1999). Colvin and colleagues (1993) suggested the following outcomes were possible: "(a) serious problem behavior may be prevented, (b) students who have been labeled as at risk may be directed toward more appropriate and normal levels of functioning, (c) the behavior of students without disabilities may be strengthened and occasions for appropriate modeling may be increased, and (d) improvement in student behavior may be maintained (p. 17)."

In 1990, Carr, Robinson, and Palumbo suggested that functional assessments, done carefully could be used as a prevention to lead to positive effective programs. The

literature continues to reflect that systematic preintervention assessment can lead to positive outcomes by avoiding punitive strategies and developing positive interventions (Dunlap et al., 1993; Foster-Johnson & Dunlap, 1993).

Some methods for developing interventions have been directed at moral and ethical issues, while others have focused on development and evaluation of positive means of treating problem behavior (e.g., Dunlap et al., 1993; Horner et al., 1990; Sugai & Colvin, 1997). Many strategies and procedures for managing behaviors have gone through a refinement process over the last decade, using individualized functional behavioral assessments (FBA) (e.g., Dunlap et al., 1993; Fitzsimmons, 1998; Jolivette, Scott, & Nelson, 2000; Sugai & Colvin, 1997).

Functional Behavioral Assessment

Most recently, research (e.g., Dunlap & Kern, 1993; Dunlap et al., 1994; Kern, Dunlap, Clarke & Childs, 1994; Lewis & Sugai, 1996) has focused on the assessment of student behavior with the aim of individualizing assessment and intervention (Penno, Frank, & Wacker, 2000). FBAs are a systematic way to develop hypothesis about the context, occurrence, and maintenance of behavior (e.g., Blair, Umbreit, & Bos, 1999; Dunlap et al., 1993; Foster-Johnson & Dunlap, 1993; Munk & Repp, 1994; Penno et al., 2000; Sugai & Colvin, 1997). The key to functional assessment is the collection of contextual information about variables and events surrounding behaviors (Foster-Johnson, & Dunlap, 1993).

Foster-Johnson and Dunlap (1993) outlined several steps in gathering information for functional behavioral assessment: (a) identification and definition of target behaviors,

(b) identification of events and circumstances regularly associated with the occurrence and nonoccurrence of the problem behaviors, (c) determination of potential function(s) or motivation underlying the behavior, (d) development of an hypothesis statement, describing the relationship between the behavior, events and circumstances in the environment, and (e) development of an appropriate intervention.

Identifying target behaviors is crucial to the procedure because a standard description is given that is reliable across all responders (Foster-Johnson & Dunlap, 1993). Identifying events and circumstances provides information as to specific circumstances associated with the likelihood and high probability of behavior (O'Neill, Horner, Albin, Storey, & Sprague, 1990). Determining the function of a behavior allows antecedents and consequences to be discovered, as well. Following the development of hypothesis related to the behavior and events, and interventions and effective behavior plans can then be developed through the modification of contexts associated with challenging behaviors (Foster-Johnson & Dunlap, 1993; O'Neill et al., 1990; Sugai, Horner, & Sprague, 1999).

Functional analysis, on the other hand, is a much more restrictive term (Fox et al., 1998). Functional analysis can be defined as the direct systematic manipulation of classroom variables and environmental event suspected of affecting challenging behaviors and the observation of the impact on behavior (Fox et al., 1998; Gresham, Quinn, & Restori, 1999; Sugai, et al., 1999). In essence, functional analysis falls under the larger category of functional assessment, as the results from carrying out the analysis can be used to clarify the hypothesized function of the challenging behavior discovered

during the assessment (Dunlap et al., 1993; Fox et al., 1998).

In 1993, Dunlap and colleagues reported that although there were encouraging examples, little evidence was available to suggest that the process of functional assessment was at that time, a viable option in applied setting with E/BD students. However, Fox and colleagues in 1998, reviewed eighteen studies, which targeted challenging behavior, applied functional assessment, and used participants who had challenging behavior with a diagnosis of E/BD or similar diagnosis. The authors found that significant progress has been made in methods tailored to E/BD students as well as improvements with instrumentation, which signified advances in functional assessment with students with E/BD. It was noted, however, that researchers should be mindful of the need to assess the reliability of instruments in use. Gable (1999) also raised concerns and challenges related to the clinical procedures, now proven effective, being used in school settings. Alternative options, strategies and procedures are needed to strengthen present methodology.

Curriculum Adaptation

Researchers report that instructional and curricular modifications have the potential to have a positive effect on students with E/BD, yet these strategies are rarely utilized by teachers (Gunter & Denny, 1998; Meadows et al., 1994). In their 1994 study, Meadows and colleagues found that teachers made minimal modifications and used the same curricula, behavior management techniques, and had the same class rules for all of their students.

Most behavior management interventions in the classroom seek to modify

problem behavior through the alteration of antecedents (e.g., teacher instruction, task difficulty) or through consequences (e.g., teacher praise, corrective feedback, application of negative contingencies) (Dunlap & Kern, 1993; Fox et al., 1998). This creates inconsistency due to the fact that student behaviors often do not follow orderly patterns (Dadson & Horner, 1993). The inconsistency may also be due to the role of antecedent or setting events. Setting events (Kantor, 1959) are occurrences in the life of a student, altering the value of reinforcement and changing the impact of stimuli. If educators are to develop and provide practical and positive systems of support, the role of setting events and the uses must be understood (Pyles & Bailey, 1990).

One particular approach suggested to ameliorate this problem is the actual manipulation of antecedent stimuli, such as instructional and curricular variables, used as a positive behavior support and in opposition to traditional intrusive measures (Dunlap & Kern, 1993; Fuchs, Fuchs, & Bishop, 1992). A number of researchers (e.g., Carr et al., 1994; Dunlap, et al., 1993; Dunlap et al., 1991; Kern, Childs, Dunlap, Clarke, & Falk, 1994) have conducted research in this area and extended it to include students with E/BD.

Kern and colleagues (1994) evaluated the process of assessment-based, curricular intervention with an elementary school child with emotional and behavioral challenges. Functional assessment data supported the hypothesis and subsequent curricular adaptations including self-monitoring were developed and were found to be successful in increasing on-task behavior. Additionally, improvements were maintained throughout the year. The results provide support for curricular modifications as an effective intervention. In another study, Dunlap and colleagues (1994) also demonstrated the effectiveness of

functional assessment and curriculum-based intervention for producing sustained reductions in chronic and severe behavior problems of an adolescent female.

Munk and Repp (1994) reviewed studies that used instructional variables as nonaversive intervention with problem behaviors. These studies included, pace of instruction (Dunlap, Dyer, & Koegel, 1983; West & Sloane, 1986), task variation (Dunlap, 1984; Winterling, Dunlap, & O'Neill, 1987), partial and whole task training (Weld & Evans, 1990), decreasing task difficulty (Carr & Durand, 1986; Weeks & Gaylord Ross, 1981), a multielement package (Repp & Karsh, 1990), and student choice of task (Dunlap, et al., 1991; Dyer, Dunlap, & Winterling, 1990). All treatments were projected to receive increasing attention due to their effectiveness and nonintrusive characteristics (Munk & Repp, 1994). Further study was recommended.

Recently, choice and preference strategies have been proven successful in decreasing social aggression noncompliance (Cooper, Peck, Wacker, & Millard, 1992). Other researchers (Dunlap et al, 1993; Dunlap et al., 1994; Foster-Johnson, Ferro, & Dunlap, 1994) are extending research and validating the use of choice-making and preferred stimuli, specifically with students with E/BD.

Researchers are particularly interested in the use of curricular adaptations incorporating individual preference (Clarke et al., 1995; Cooper et al., 1992; Dyer et al., 1990; Foster-Johnson et al, 1994; Koegel, Dyer, & Bell, 1987). Cooper and colleagues (1992) showed that stimuli based on individual preference could be used to facilitate learning and task performance. In addition, Clarke and colleagues (1995) added support by showing that student interests can be identified and used to modify curriculum so as to

improve not only the quality of educational materials, but also the disruptive behavior of students with E/BD. Because of the additive effects of a variety of classroom intervention strategies, multicomponent intervention designs are recommended and produce improved outcomes (Kauffman, Lloyd, Baker, & Riedel, 1995; Peacock Hill Working Group, 1991)

Student Interest

In 1913, John Dewey deemed interest as the principal motivator in educational settings. Interests are what compel people to seek things out (Anderson, 1981), to attain specific goals, or acquire certain objects (Hammill, 1987). Hammill describes interest as a fascination and Schiefele's (1991) definition includes the element of positive feelings. Prenzel (1992) suggests that in simple, everyday terms, interest describes a preference for and emotion toward objects.

Use of interest, based on preference, can be a tool effectively used to motivate and reinforce learning, to provide tasks which are relevant to the student (Hammill, 1987; Stipek, 1998), and to ameliorate behavior problem (Clarke et al., 1995; Cooper et al., 1992). Interest can serve two roles in the influence of motivational choices (Middleton & Toluk, 1999). Interest can allow the student to decide whether engagement in the task is worthwhile and secondly, it can be modified during the task so future reference can make use of cumulative experience.

Capturing and holding the interest of students is integral to the acquisition of an appreciation for learning (Bergin, 1999; Dewey, 1913). Just as important, particularly for students with E/BD, when students have an appreciation for learning, they are more likely to be engaged in the task, thus displaying fewer behavior problems. It should be

noted, however, that interest, particularly in children, is potentially ephemeral and subject to change devoid of notice. Interest has been categorized as person-centered or situation-centered (Krapp, Hidi, & Renninger 1992). The person-centered approach reflects a person's dispositional preferences, as well as preferences for certain activities. The situational-approach surveys the environmental conditions and activities that generate interest.

There are a number of strategies for cultivating and maintaining student interest: (a) piquing student curiosity, (b) providing student with optimal level of challenge, (c) personalizing the learning experience, and (d) selecting instructional materials and activities according to student interest (Okolo, Bahr, & Gardner, 1995). It could be that the strategy holding the most promise for promoting student interest in learning is to find out what interests the child and then select materials to reflect those interests (Brophy, 1996; Dewey, 1913, Okolo et al., 1995; Wlodkowski, 1981). Educators can use a variety of instruments and methods to obtain information related to student interest: interviews, questionnaires, interest inventories, and observations. Current student interest can also be recognized by being alert to culture, friends, social activities, play, and previous learning experiences (Wlodkowski, 1981).

Motivation

Motivation has been described as an "obstinate, ambiguous creature that stubbornly resists definition" (Wlodkowski, 1981). Educationally, motivation has to do with the desire of a student to participate in the learning process and concerns the reasons or functions related to behaviors of involvement or uninvolvement in academic activities

(Ames, 1990; Brophy, 1987,1999; Durand & Crimmins, 1992; Lumsden, 1994; Renchler, 1992; Wlodkowski ,1981). Considering the poor outcomes for students with E/BD, it is important to remember that motivational deficits have obvious and critical implications for the academic progress of students (Anderman & Midgley, 1998). When students are motivated, communication increases, anxiety decreases, and discipline problems decrease (Wlodkowski, 1984, 1999).

Bigge (1982) suggests there are two kinds of motivation specific to learning: social and personal motivation. Social motivation includes an individual's need for affiliation, approval, and esteem, while personal motivation includes the need to achieve or master a task. Both academic and behavioral sources of motivation may be intrinsic or extrinsic (Ames & Ames, 1989; Deci & Ryan, 1985).

Intrinsic motivation is the undertaking of an activity for its own sake, enjoyment provided, learning, or feeling of accomplishment (Ames & Ames, 1989; Husman & Lens, 1999; Lumsden, 1994; Raffini, 1996). If a person completes a task, despite the absence of reward or punishment, it is likely the motivation intrinsic (Ames & Ames, 1989). Bergin (1999) noted the overlap in the constructs of intrinsic motivation and interest, due to the absence of any external reward. The distinction between the two is that interest refers to interaction with specific tasks or objects (Bergin, 1999; Krapp et al., 1992).

Conversely, extrinsic motivation is the undertaking of an activity to obtain some reward or avoid some punishment external to the activity (Elliot, 1999; Husman & Lens, 1999; Lumsden, 1994; Raffini, 1996). When the sole reason for acting or doing is to get something outside the activity itself, it is then considered extrinsic (Ames & Ames,

1989). All too often, the only tools available in the motivational toolbox of teachers are those of punishment and reward (Raffini, 1996). It has been documented in over one hundred studies that the misuse of extrinsic incentives and consequences have the potential for a variety of negative effects, including task performance and intrinsic motivation (e.g., Ames & Ames, 1989; Nichols, 1996; Raffini, 1996). Investigations in the field of motivation theory are now focused on techniques for enhancing intrinsic motivation toward particular activities and researchers are studying how activities themselves might be structured and designed. One form of motivation should not be ignored for the sake of the other, however. It is likely a combination of both intrinsic and extrinsic motivation that plays a role in total motivation for each student (Ames & Ames, 1989).

Achievement Motivation

In order to attend school, resolve to learn, and engage in learning, students require motivation. Okolo et al., (1995) concluded that in classroom situations, achievement motivation was the product of the interaction between student characteristics and instructional practices. The motivation to learn is a competency acquired through experience, yet stimulated through modeling, direct instruction, and instructional strategies (Brophy, 1987, 1996). Deficits in instructional strategies by teachers interacting with social, behavioral, and academic deficits of students with E/BD have important implications for the classroom, student progress, and outcomes. The link between instructional strategies and student characteristics is an important link as it is well established that outcomes for students with E/BD are poor (Steinberg & Knitzer, 1992),

and ineffective strategies of teachers of students with E/BD have been documented and criticized (Gunter & Denny, 1999; Meadows et al., 1994; Peacock Hill Working Group, 1991; Steinberg & Knitzer, 1992; Wheby et al., 1998; Wheby et al., 1995).

Motivational research initially focused on industrial workers and was conducted in the workplace (Small, 1997). Research on motivation in the context of education, in the last fifteen years has centered on the classroom (Ames, 1990; Brophy, 1996; Renchler, 1992a, 1992b; Wlodkowski, 1981). Researchers now focus on the identification of effective techniques for the enhancement of instructional design and improved classroom management, using motivational concepts originally found in industry (Small, 1997; Wlodkowski, 1981). Specifically, various dimensions of a task itself can foster the motivation to learn (Lumsden, 1994).

Behavior Motivation

Recently, behaviors most associated with achievement motivation were outlined by Okolo and colleagues in 1995. Students who are motivated to learn are those who: " (a) pay attention to the teacher and maintain interest in academic activities, (b) volunteer answers in class, (c) ask for guidance when needed, (d) persist in trying to solve problems themselves, (e) complete activities above and beyond those required for a grade, and (f) take risks in order to improve their own skills or knowledge (p. 279)." When a student becomes disinterested in an academic task and is unmotivated to learn, disengagement will occur. Curriculum can be an avenue to engage students and when engaged, they are more motivated (Orkwis, 1999).

Despite every effort, some students, particularly those at risk, are unmotivated by

teachers, school, or life. These students may become work-inhibited or unable to engage consistently in their schoolwork (Brophy, 1996). A lack in the development of achievement motivation results in the converse development and often high motivation to sustain patterns of poor work, avoidance, or postponement. The result is an effort by the student to interact in a way to get what they want and need. Every behavior displayed by a student has a function or underlying motivation. Problem behaviors are actually symptoms to a student's underlying motivation to escape something, to avoid something, or to gain something (Fitzsimmons, 1998; Foster-Johnson & Dunlap, 1993). The literature commonly refers to these motivations as the functions of behavior (Fitzsimmons, 1998; Foster-Johnson & Dunlap, 1993; Jolivette et al., 2000) The behavior itself, not the function or motivation, is deemed appropriate or inappropriate. Numerous strategies are available for understanding relationships between behaviors and the student's environment (Carr et al., 1990; O'Neill et al., 1990). The strategies, commonly referred to as functional assessments, result in statements regarding the motivation or function of behaviors.

Simply describing a student behavior will not determine the motivation of that behavior (Foster-Johnson & Dunlap, 1993). The context and consequences surrounding the behavior, and when possible, the student's learning history, must be understood. Escape and avoidance are common behaviors displayed by students to avoid tasks or circumstances that are disliked. Specifically, common motivations for behavioral problems include gaining teacher attention, gaining peer attention, escaping or avoiding tasks or persons, or acquiring access to a specific item (Jolivette et al., 2000). Tantrums,

aggression, and off-task behaviors are the most common avoidance and escape behaviors (Foster-Johnson & Dunlap, 1993).

Conclusion

It is important that teachers provide activities and materials that are both interesting and motivating (Dunlap & Fox, 1999). Curriculum can provide a means of engagement, thus creating the motivation to participate and learn (Orkwis, 1999). Active engagement is critical to effective instruction and management of behavioral problems. If strategies employed by teachers are to be effective, they must be capable of producing desired results or positive outcomes.

In light of the continued poor outcomes for students with E/BD, the efficacy of traditional strategies continues to be questionable (Knitzer et al., 1990; U.S. Department of Education, 1997). There is little question that research validating effective strategies should influence practices within the classroom (Dunlap & Childs, 1995; Groesnick, George, George, & Lewis, 1991; Jones, 1992; Knitzer at al., 1990; Peacock Hill Working Group, 1991). Long-term behavioral change cannot be attributed to one single intervention or theoretical perspective (Jones, 1992; Kauffman et al., 1995). Thus, assessment-based approaches offer an alternative to traditional, aversive strategies, by addressing positive supports through the use of functional behavioral assessment (Ervin et al., 2000)

Assessment-based approaches incorporating student interest into the context of academic assignments can effectively reduce disruptive behaviors (Clarke et al., 1995; Cooper et al, 1992; Dyer et al., 1990; Foster-Johnson et al, 1994; Koegel et al., 1987).

Clarke and colleagues in 1995 extended those findings to include students with E/BD. More research is needed to contribute to an already growing body of knowledge verifying the value of instructional and curricular modifications used within a positive behavioral support program (Clarke, et al., 1995; Dunlap & Kern, 1993; Munk & Repp, 1994).

CHAPTER III

METHODOLOGY AND PROCEDURES

The purpose of this study was to investigate the manipulation of antecedent stimuli through the implementation of individualized, curricular adaptations, based on student interest, to reduce the problem behavior of students exhibiting disruptive behaviors. A second purpose was to explore the effect of those adaptations on the behavior motivation of students with Emotional/Behavioral Disorders (E/BD). This chapter is organized into the following areas to discuss the methodology for the study: (a) research questions, (b) subject selection, (c) experimental design, (d) procedures, (e) data collection, and (f) analysis.

Permission to conduct the study in a public school classroom was granted by the district Special Education Director and the Program Coordinator for Emotional/Behavioral Disorders Program (Appendix A). The study was approved by the Institutional Review Board of the University of North Texas.

Research Questions

Literature suggests that for some students, behavior can be linked to motivation and interest in school (Clarke et al., 1995; Cooper et al., 1992) and that these behaviors can be improved by incorporating student interests through curricular adaptations (e.g., Dyer, Dunlap, & Winterling, 1990; Foster- Johnson, Ferro, & Dunlap, 1994; Koegel,

Dyer, & Bell, 1987). Unfortunately, few studies of this nature (e.g., Clarke, et al., 1995; Dunlap, Kern-Dunlap, Clarke, and Robbins, 1991) have been conducted with students displaying E/BD.

This study explored the effect of individualized, curricular accommodations incorporating student interest and the impact on the occurrence/nonoccurrence of disruptive/desirable behavior and the motivation of behavior displayed by students with E/BD. The Behavior Dimension Rating Scale (BDRS; Bullock & Wilson, 1989) was used in the initial and final phase of the study, in addition to observation, to help establish a baseline of student behavior and measure progress, respectively. The Motivation Assessment Scale (MAS; Durand & Crimmins, 1992) was used in the initial and final stage of the investigation to determine links between behavior and motivation as a result of curricular adaptations. Several research questions guided the study:

Research Question #1

Do individualized, curricular accommodations developed according to student interest, have an impact on the occurrence of disruptive behaviors, as measured by an ABAB reversal design analysis?

Research Question #2

Do individualized, curricular accommodations developed according to student interest, have an impact on the nonoccurrence of disruptive behaviors as measured by an ABAB reversal design analysis?

Research Question #3

Do individualized, curricular accommodations developed according to student interest,

have an effect on the occurrence of desirable behaviors as measured by an ABAB reversal design analysis?

Research Question #4

Do individualized, curricular accommodations developed according to student interest, have an effect on the nonoccurrence of desirable behaviors as measured by an ABAB reversal design analysis?

Research Question #5

Do individualized, curricular accommodations developed according to student interest, have an effect on motivation of student behavior as measured by the Motivation Assessment Scale (MAS; Durand & Crimmins, 1992)?

Subject Selection

An elementary school in a suburban school district served as the location for the study. Four male elementary school students participated in this investigation. All students referred and participating in the study had been formally evaluated and identified as having Emotional/ Behavioral Disorders. All participants had been placed in a special education classroom for students with E/BD. Student referrals were drawn from grades three through six. Students were identified for referral by the teacher. Referral was based on substantial off-task and disruptive behavior. Referrals came from the classroom teachers after an initial meeting between the researcher and staff.

Selection was made based on responses given by the teacher during an informal verbal interview (Appendix B), eligibility as E/BD, permission given by parent/guardian, and a review of the functional behavioral assessments within the student records. To

ensure confidentiality in all matters related to the investigation, students were given pseudo-names, which were used throughout the study. A description of each student is given below.

Brant is an 11 year old African American male with E/BD, with additional diagnosis of Other Health Impairment (OHI) and Attention Deficit Hyperactivity Disorder (ADHD). Brant has a history of behavior problems including disruptive behavior and inappropriate peer/teacher relationships. His functional behavioral assessment and behavior intervention plan indicated problems following instructions or directions, a general lack of attentiveness, and an inability to sit still for any extended period of time. Referral by the teacher focused on off-task behavior, which was disruptive to other students. BDRS scores confirmed behavior problems serious enough to warrant special attention (Bullock & Wilson, 1989). Brant scored in the 94.5 percentile rank in Aggressive/Acting Out behavior, representing about 13% of the population and in the 81.6 percentile rank for Irresponsible/Inattentive behavior, which represents about 7% of the population.

Dan is an 11 year old Caucasian male with E/BD having an additional diagnosis of Other Health Impaired (OHI) and Speech Impaired (SI). Dan is socially and developmentally behind his peers. His functional behavioral assessment addressed behaviors of noncompliance, off-task behavior, poor peer relationships and following directions. For Dan, referral for participation in the study was based on off-task behavior and an inability to follow directions. Dan scored in the 78.8 percentile rank for both Irresponsible/Inattentive behaviors and Social Withdrawal and 86.4 percentile rank in

subscale 4- Fearful/Anxious behavior. His overall percentile rank was 81.6 indicating a representation of only 13% of the population, who might be expected to have behavioral problems that interfere with personal/emotional development (Bullock & Wilson, 1989).

Maxx is a 10 year old Caucasian male with E/BD, also diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). His functional behavioral assessment indicated pervasive unhappiness, noncompliance, use of profanity, and peer relationship problems. Maxx is easily distracted and easily provoked. The teacher referred Maxx for participation in the study due to persistent inattentiveness, inability to follow directions and consistent off-task behavior. BDRS scores for Maxx were indicative of some behavioral difficulties and inattentive patterns of interaction. In subscale 2 weaknesses related to Irresponsible/ Inattentive behavior were evident as he scored in the 61.8 percentile rank and in subscale 1 related to Aggression/Acting , Maxx scored in the 54 percentile rank. Although not serious, behaviors were problematic enough to warrant referral.

Stan is an 11 year old Caucasian male with E/BD, with multiple diagnoses in Autism, Learning Disabilities (LD), and Speech Impairments (SI). Behaviors indicated on his functional behavioral assessment include blurting out, not following directions, failure to get the teacher's attention appropriately, and inappropriate conversations with peers and teachers. Referral by the teacher, for this study, primarily focused on off-task behavior due to attention difficulties. Although Stan's overall percentile rank on the BDRS was in the 46.0 percentile rank, he scored below the 50 percentile rank in subscale 2 related to Irresponsible/ Inattentive behavior, as well as in subscale 3 related to Socially

Withdrawn behavior.

The study was carried out at in an elementary school within a large, urban Texas district, which houses a program for students with E/BD. The school district is the 9th largest district in Texas. The elementary school is one of 47 public elementary schools within the district. The special education classroom hosting the study accommodates students in grade four through six. Class size in the special education room varies from six to ten students during of the year. All of the students in the E/BD program receive at least a portion of their academics within this classroom. The room is connected with an observation room equipped with a one-way window for viewing the classroom. Students were told they would be videotaped over the course of a few weeks, yet were unaware of the specific time they were observed and videotaped. All observations, in vivo and via video camera recording were done from the observation room and out of the view of students.

Experimental Design

In this study, an ABAB reversal design was used to investigate the effectiveness of individualized, curricular accommodations incorporating student interest and the impact on the motivation and occurrence/nonoccurrence of disruptive and desirable behaviors displayed by students with E/BD. The ABAB design is a single group experiment, withdrawal of treatment and the establishment of a second baseline condition, followed by reinstatement of a second intervention (Gall, Borg, & Gall, 1996). The design has high internal validity because if the target behavior changes as expected in each phase, one can conclude that the changes are due to the effect of the treatment.

An additional strength of the ABAB design is the structure, designed to end on a positive note when the experiment ends after the reintroduction of the treatment variable, which is expected to produce positive results. The dependent variables in this study were the disruptive and desirable behaviors, as well as the behavior motivation. The single independent variable was curricular adaptations, based on student interest.

Instrumentation

In addition to interval system data collection, two formal instruments were used in the initial and final stage of the investigation

Behavior Dimension Rating Scale

The BDRS (Bullock & Wilson, 1989) was developed for the purpose of examining the patterns of behavior exhibited by students with E/BD. The instrument contains 43 items, paired as bipolar descriptors. For each pair of descriptors, the rater must choose a point on a continuum of seven points, which best matches the behaviors exhibited. The instrument is easy to use and can be completed and scored in less than 30 minutes. Norming of the BDRS was done using a national sample of subjects from kindergarten through grade eleven. The BDRS yields 4 subscale scores: Aggressive/Acting behaviors, Irresponsible/Inattentive behaviors, Socially Withdrawn behaviors, and Fearful/Anxious behaviors, as well as a total score and percentile rank. Content and construct validity of the BDRS was established through review processes and factor analysis, respectively. A test-retest reliability coefficient of .91 was recorded for the instrument as a whole.

Motivation Assessment Scale

The MAS (Durand & Crimmins, 1992) is a 16 item scale that assesses the function or motivation of problem target behaviors by assessing the influence on behaviors. The scale is broken into four categories of motivation: Social Attention, Tangibles, Escape, and Sensory. Knowing how these categories or factors motivate behavior has reportedly been very helpful in designing treatment and intervention (Durand, 1990). An advantage to using the MAS is that specific behaviors can be targeted and the 16 descriptions within the scale answered in the context of that particular behavior. Responses can then be tailored to an underlying motivation for that behavior.

Interrater reliability on the MAS, as measured by the Pearson correlation coefficient, ranged from .80 to .95. Test-retest reliability ranged from .89 to .98. The MAS as a tool for assessing influences on problem behavior and the function/motivation behind a behavior has been validated (e.g., Bihm, Kienlen, Ness, & Poindexter, 1991; Durand & Carr, 1991). Caution is given, however, that results may vary unless a behavior is specified (Durand & Crimmins, 1992). For the purposes of this study, target behaviors were specified.

Data Collection

During the study, data were collected using a partial interval system in which the occurrence or nonoccurrence of targeted disruptive and desirable behaviors were recorded during continuous 15-second intervals divided into 10-seconds of observation followed by 5- seconds of recording (Clarke et al., 1995). Behaviors were recorded independently, thus making it possible to record both disruptive and desirable behaviors

in the same interval (Appendix C). Data were collected for 7 minutes per session, per participant. An audio recording using verbal cues was made prior to the initial session and was used to signal the beginning and end of each interval. The tape was played simultaneously with the videotaping each day allowing for precise timing. The beginning of each session commenced when the student was presented with the task or engaged in the lesson by the teacher. Completion of task and work production were not variables in this study, so sessions were limited to the initial 7 minutes of an assignment.

Observer Training

Two observers were used to record data. Using two observers allowed for the control of observer bias by the researcher and the establishment of observer reliability (Gall et al., 1996).

Prior to actual data collection, the second observer was trained by the researcher to identify both correct and incorrect topographies of the target behaviors.

Training included a discussion of the observation form, coding, expectations, and the establishment of "criterion related observer reliability," which is the extent to which the second observer's score's agree with researcher who developed the observation instrument (Gall et al., 1996). This type of reliability during training provided assurance that the second observer's understanding of the target behaviors and variables were the same as the researcher.

A training videotape was made immediately following parental/guardian permission for participation. Observers watched and coded the same tape and a check was made for agreement. Observations were made of tapes on all of the target behaviors.

When any observer disagreement occurred, the videotape was replayed and discussed. This process was repeated until there was assurance that the understanding of the variables was the same by both observers. Practice observations were conducted using a practice tape of all targeted behaviors until 80% observer agreement was reached. Reliability was not only checked prior to, but also checked weekly throughout data collection.

Videotaping

Both in vivo sessions and videotape-recorded sessions were utilized to collect data. Data recording was done by the researcher while observing in the observation room. A portion of the data recording by the researcher was done using videotape at a later time. The researcher used a camcorder and tripod to videotape sessions each day and transferred the footage onto a VHS tape for the second observer. The second observer used videotape recording only to record data.

Data Recording

Measures of appropriate and inappropriate behavior were collected by observing the students with disabilities in their classroom setting. Disruptive behaviors were recorded when one or more of the following behaviors were displayed: an inability to initiate task engagement, talking out without staff permission, off-task behavior, and noncompliance (Clarke et al., 1995). Desirable behavior was recorded when a student exhibited one or more of the following engagement tasks: compliance with teacher instruction, eyes directed toward material or eyes directed toward teacher during verbal instruction or when appropriate (Clarke et al., 1995).

Interobserver Agreement/ Reliability

Interobserver agreement was calculated for disruptive and desirable behaviors and was determined by having a second observer independently score measures of student performance during all phases of baseline and intervention. Rater agreement is defined as intervals scored in an identical manner by two observers (Clarke et al., 1995). As there were two possible behaviors being recorded, interrater reliability percentages for each session agreements were calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. Tawny & Gast (1984) suggest this method of calculating interrater reliability

coincides with interval data collection methods because it protects against inflated ratings.

$$\frac{\text{Total Number of Agreement Intervals}}{\text{Total Agreement + Nonagreement}} \times 100$$

Agreement scores were obtained for 95% of the sessions. The overall mean agreement score across all participants was 95.13%. Observer agreements were calculated for each student: (a) 95.12% for Brant, (b) 96.08% for Maxx, (c) 93.4% for Dan, and (d) 95.94% for Stan.

Procedures

Prior to data collection, two introductory sessions were held with school personnel and the teacher. The first session was for explanation of the purpose, relevance, procedures and significance of the study. Explanation was given by the researcher regarding record review, data collection, videotape recording, curricular adaptation, and

teacher responsibilities. Criteria for participation were reviewed and the teachers were asked to consider possible students for referral. A follow-up meeting was held with the teacher to conduct an informal interview and accept referrals for participation.

Once students were chosen for participation, the teacher completed the BDRS (Bullock & Wilson, 1989) on each participant, to assist in the development of baseline data. Completion of the BDRS took the teachers less than 15 minutes per child. The researcher scored and charted results of the scale filled out by the teacher. The BDRS was completed during the initial and final stages of the study to measure progress.

Teachers were also asked to complete the MAS (Durand & Crimmins, 1992). The MAS was completed during the initial and final phase of the study to assess function of behavior and effect on motivation of behavior. Completion of the MAS took the teachers less than 15 minutes per child.

Student record review was carried out to support criteria for participation. A review of existing functional behavioral assessments (FBAs), observations, teacher interviews and results of the BDRS were used to establish an appropriate link between behavior and problematic academic tasks for each student and to aid in the establishment of baseline data. Once participants were chosen, letters of consent for participation in the study were given to the parent/guardian to sign. Following receipt of permission to participate, and prior to data collection, a videotape was made of targeted behaviors displayed by each student selected for the study. This tape was used for the purpose of training the observers.

Informal, individual, student interviews were carried out with each student to

determine student interests for use when adapting curriculum (Appendix D) and to explain the study to the students. Interviews were casual in nature and included gathering information about interests important to the child (e.g., favorite movies, television shows, videogames, singers, cartoons, food). Problematic assignments identified by the teacher as related to inappropriate behaviors were then modified to incorporate student interest. Social Studies assignments were problematic for Maxx, Dan, and Stan and were reportedly associated with high off-task behavior. Off-task behavior for Brant was a problem during Spelling and English. All observations, data collection, and adaptations were made within these subjects for the duration of the study. Adaptations were made while maintaining the integrity of the instructional objectives. The only variation between "standard" and "interest-based" assignments was the subject matter, revised to incorporate identified student interest. Content, goals, and objectives were not compromised.

Baseline

This study investigated the effect of a single intervention. In all experimental sessions, no changes other than ones indicated were in effect. Schedules of reinforcement, error correction, behavior management, all classroom structures and strategies, and teaching styles remained in effect. Goals, objectives, and criteria remained intact, as well.

The first step was to help establish a pretreatment baseline by collecting data on the target disruptive and desirable behaviors (Center, 1989) and by using results from the BDRS and MAS. To demonstrate experimental control, a series of sessions using an

interval recording system to measure the occurrence/nonoccurrence of disruptive/desirable behavior for each student in the study, was also carried out with standard assignments as would normally be given. Brant, Dan, and Stan were observed daily for 5 days until a baseline was established. Maxx was observed 4 days. Each observation lasted seven minutes and used an interval system allowing for 10 seconds of observation and 5 seconds for recording the occurrence of both disruptive and desirable behaviors.

Intervention

During five sessions for Brant, Dan, and Stan and four sessions for Maxx, a baseline was established with the baseline condition being the "standard assignment." This condition was then changed to an "interest- based" assignment. The interest-based assignment was a variation of the standard assignment identified as problematic, which was adapted using student interest. For Dan, Maxx, and Stan, Social Studies assignments taken directly from the adopted curriculum were used. For Brant, adopted Spelling and English curriculum were used. Assignments were printed on various colors of paper and were infused and "decorated" with favorites of each student. Assignments were individualized based on the interest interview done with students. Digital pictures of the students, their favorite singers, sports heroes, videos, games, and cartoons were utilized in a variety of ways. Student names were printed on each assignment using different fonts and colors. Teen magazines, stickers, sports programs, and the Internet were the source of most of the material used to adapt the assignments.

This "intervention" phase, consisting of interest-based assignments, continued

until a change in behavior was noted and established. Once a change in behavior was established, the standard assignment was reinstated to evaluate the effects on the disruptive/desirable target behaviors, and continued until a second baseline was established. Following the establishment of the second baseline, the interest-based assignment was re-instated.

Analysis

Analysis for each student is based on pre/post BDRS scores, MAS findings, and data from the ABAB reversal design. The BDRS was scored and interpreted based on graphing of standard scores and totals. Initial pre-scores from the BDRS and the MAS were used as part of the baseline data and post scores were used to help chart progress.

On the BDRS, each student's scores were analyzed for areas that supported the target behaviors in the functional behavioral assessment and baseline data. Raw scores were converted to standard scores and percentile ranks. Confidence intervals were calculated for each subscale and standard scores were graphed for each subscale. Each profile was analyzed for information consistent with the functional behavioral analysis and areas of weakness leading to referral for participation in the study.

The MAS , scored for each participant, was based on a specific target behavior and was calculated using a total score, mean score, and relative ranking. Scoring on the MAS was used to determine influences on behavior and motivation of specific behaviors.

Research questions were answered as a result of the calculations performed and graphed on disruptive/desirable behavior collected by observers throughout the study. Results were obtained by calculating and graphing the percentage of disruptive and

desirable behavior collected throughout the study. Graphs depict both disruptive and desirable behaviors and show percentages of each per session. Within each phase of the study, data points were analyzed for mean levels of the target behaviors. Data collected are presented and analyzed graphically to show pattern changes.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the manipulation of antecedent stimuli through the implementation of individualized, curricular adaptations, based on student interest, thereby reducing problem behavior and increasing the desirable behavior of students with Emotional/Behavioral Disorders (E/BD) who exhibit disruptive behaviors. A second purpose was to explore the effect of those adaptations on the behavior motivation of students with E/BD. In this study, an ABAB reversal design was used to measure the effectiveness of individualized, curricular accommodations incorporating student interest and the impact on the motivation and occurrence/nonoccurrence of disruptive and desirable behaviors displayed by students with E/BD. The observation data collected related to disruptive and desirable behavior in the classroom setting during all baseline and intervention phases.

The current study consisted of four phases. The first phase was the establishment of a pretreatment baseline using standard assignments given by the classroom teacher. The second phase was an intervention utilizing student interest to adapt curricular materials. The third phase was a return to baseline using standard assignments given by the classroom teacher. The fourth phase was a reinstatement of the initial intervention used in phase two, also using student interest to adapt curricular materials.

This chapter presents the results related to effects of the intervention on the target behaviors for each student. Data are presented in graphic format, as well as tables. The

findings of the study are presented as follows: (a) reliability, (b) analysis of data, and (c) discussion.

Reliability

The method used to calculate interobserver reliability, previously described in Chapter III, was calculated on an interval-by-interval basis. Table I summarizes reliability data by giving a range of scores by phase, for each student, and includes a mean score for each student.

During pretreatment baseline, the range of percentages for both observers across all participants was 84.6 - 100%. Initial intervention percentages ranged from 88.8-100%. During the second baseline, percentages ranged from 78.5 - 100%. The second and final intervention percentages ranged from 85.7 - 100%. The range of scores may be attributed to the fact that the teacher changed the seating of the students and some had their back to the camera. The researcher had the opportunity to move around in the observation room to determine exactly what the student was doing and the second observer could only watch the videotape. This may have increased the chance for disagreement on target behaviors. The overall range of reliability scores was 78.5 - 100%.

The mean reliability agreement for all students across all phases was 95.13%. Reliability was calculated on 95% of the interval data scores recorded by both observers. This overall high agreement rating on disruptive and desirable behaviors may be attributable to a number of factors including the preciseness of the definition of target behaviors, the periodic reliability checks during the study, and uniform data collection procedures between observers established during training.

Table 1

Range of Interobserver Reliability Scores by Phase and Student

	Range of Agreement Scores Between Observers				
Student	Pretreatment Baseline %	Interest-based Intervention %	Reversal Baseline %	Interest-based Intervention %	Overall Mean %
Brant	96.4-100	88.8-100	78.5-100	89.2-100	95.12
Dan	89.2-100	92.8-96.4	84.6-96.4	85.7-100	93.4
Maxx	96.4-100	92.8-100	89.2-100	89.2-100	96.08
Stan	84.6-100	89.2-100	96.0-100	100	95.94
All	84.6-100	88.8-100%	78.5-100	85.7-100	95.13

Analysis of Data

Observation data drawn from each phase of the study as well as pre/post treatment comparisons on the Behavior Dimension Rating Scale (BDRS) were used to answer the first four research questions:

1. Do individualized, curricular accommodations developed according to student interest, have an impact on the occurrence of disruptive behaviors, as measured by an ABAB reversal design analysis?

2. Do individualized, curricular accommodations developed according to student interest, have an impact on the nonoccurrence of disruptive behaviors as measured by an ABAB reversal design analysis?

3. Do individualized, curricular accommodations developed according to student interest, have an effect on the occurrence of desirable behaviors as measured by an ABAB reversal design analysis?

4. Do individualized, curricular accommodations developed according to student interest, have an effect on the nonoccurrence of desirable behaviors as measured by an ABAB reversal design analysis?

The fifth research question was answered utilizing information gathered from the Motivation Assessment Scale (MAS):

5. Do individualized, curricular accommodations developed according to student interest, have an effect on the motivation of student behavior as measured by the MAS (MAS; Durand & Crimmins, 1992)?

Following each implementation of interest-based curriculum, all participants exhibited an increase in desirable behavior and a decrease in disruptive behavior when a return was made to baseline. Implementation of the intervention and data collected show that individualized, curricular accommodations developed according to student interest, have an impact on the occurrence/nonoccurrence of disruptive behaviors, the occurrence/nonoccurrence of desirable behaviors and impacted the behavior motivation of students with E/BD.

Disruptive Behavior

The mean percentage rates of disruptive behavior during each phase of the study, for each participant, are presented in Table 2. Each participant showed a marked decrease in disruptive behavior with the implementation of each intervention phase. Brant, Maxx,

and Stan showed a continued decrease in disruptive behavior from the initial phase 2 interest-based intervention to the phase 4 interest-based intervention.

Figures 1-4 graphically depict individual participant data for disruptive behavior during each phase. The dotted line represents the end of pretreatment baseline, the first intervention, and the return to baseline. The initial gap in Maxx's starting datapoint indicates a one day delayed start.

Table 2

Mean Percentage of Disruptive Behavior By Students During Each Phase

Participant	Phase 1 Pretreatment Baseline %	Phase 2 Interest-based Intervention %	Phase 3 Reversal Baseline %	Phase 4 Interest-based Intervention %
Brant	83	37.6	87.8	13.8
Dan	81.4	23	72.6	39.2
Maxx	66.2	24	83.8	15.8
Stan	60.4	10.2	70.8	2.8

Brant. The mean rate of disruptive behavior for Brant during the pretreatment baseline was 83% (Table 2). Disruptive behavior was reduced to 37.6% during the first intervention. Disruptive behavior during the second baseline rose to 87.8% and fell to 13.8% during the second intervention. Brant's average rate of disruptive behavior during all baseline phases was 85.4% as compared to 25.7% during intervention. Brant's disruptive behavior surpassed first baseline scores, when the intervention was removed. Brant responded very well to the interventions and sustained improvement through both interventions. Results of the reversal analysis for Brant, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments are shown in Figure 1.

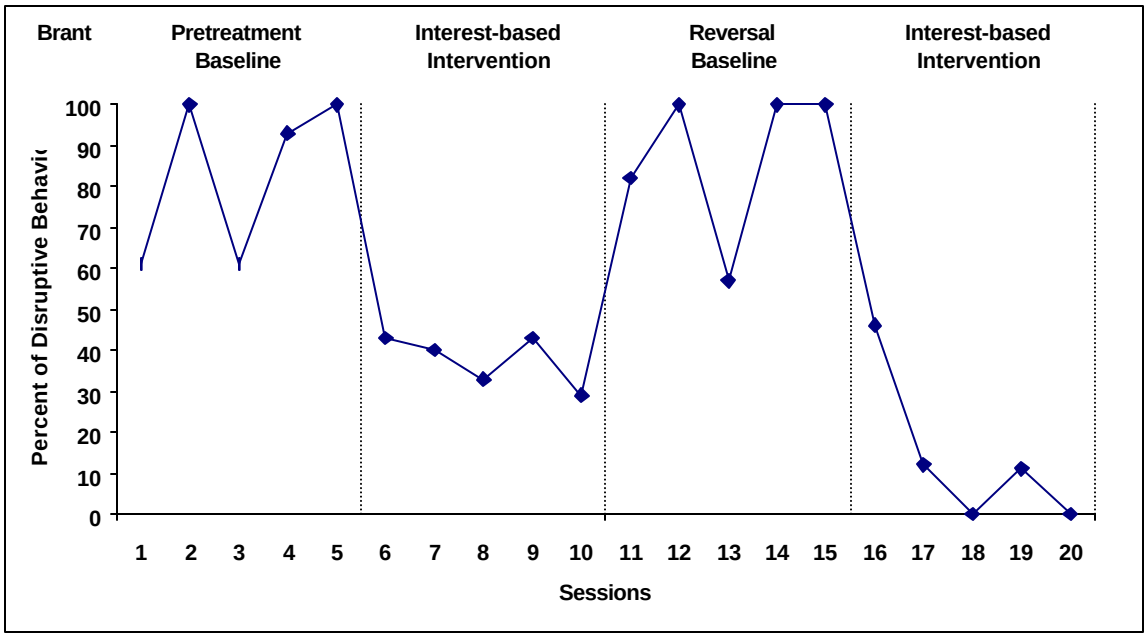


Figure 1. Results of the reversal analysis for Brant, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments.

Dan. The mean rate of disruptive behavior for Dan during the pretreatment baseline was 81.4% (Table 2). Disruptive behavior was reduced to 23% during the first intervention. Disruptive behavior during the second baseline increased to 72.6% and was reduced to 39.2% during the second intervention. Dan's average rate of disruptive behavior during baseline was 77% as compared to 31.1% during intervention. Dan displayed the most inconsistency of disruptive and desirable behavior during the study. Variability of data may be attributable to developmental delays and visits by Dan's father during the school day. Results of the reversal analysis for Dan, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments are shown in Figure 2.

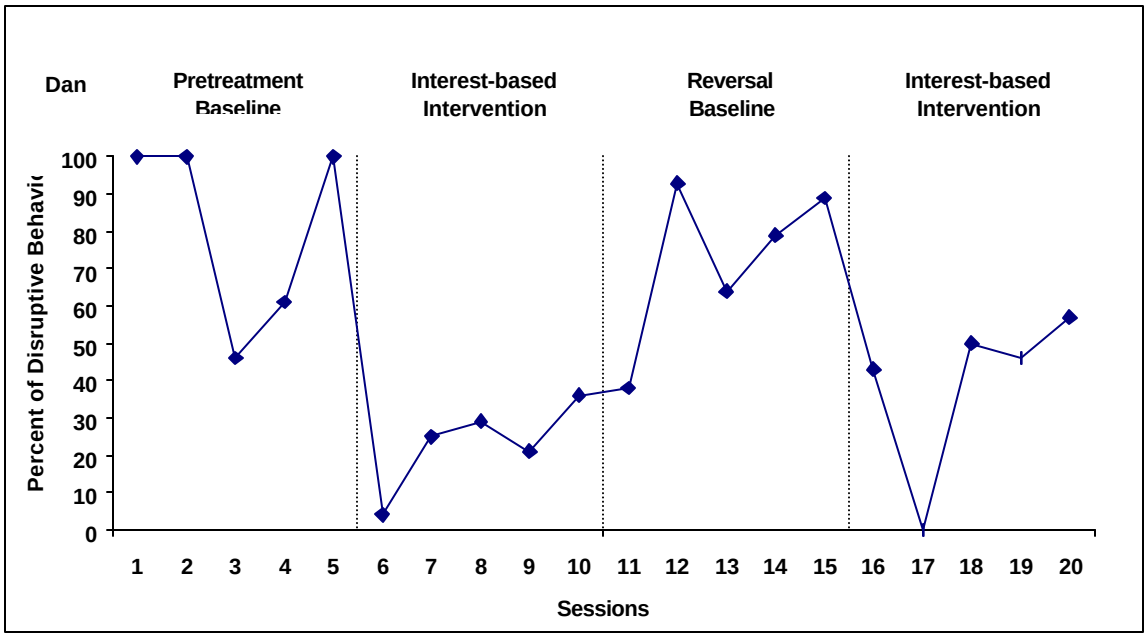


Figure 2. Results of the reversal analysis for Dan, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments.

Maxx. The mean rate of disruptive behavior for Maxx during the pretreatment baseline was 66.0% (Table 2). Disruptive behavior was reduced to 24% during the first intervention. Disruptive behavior during the second baseline increased to 83.8% and improved to 15.8% during the second intervention. Maxx's average rate of disruptive behavior during baseline phases was 85.4% as compared to 19.9% during intervention. Though Maxx's initial baseline was somewhat inconsistent, he consistently responded well to interventions and made considerable progress. Results of the reversal analysis for Maxx, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments are shown in Figure 3.

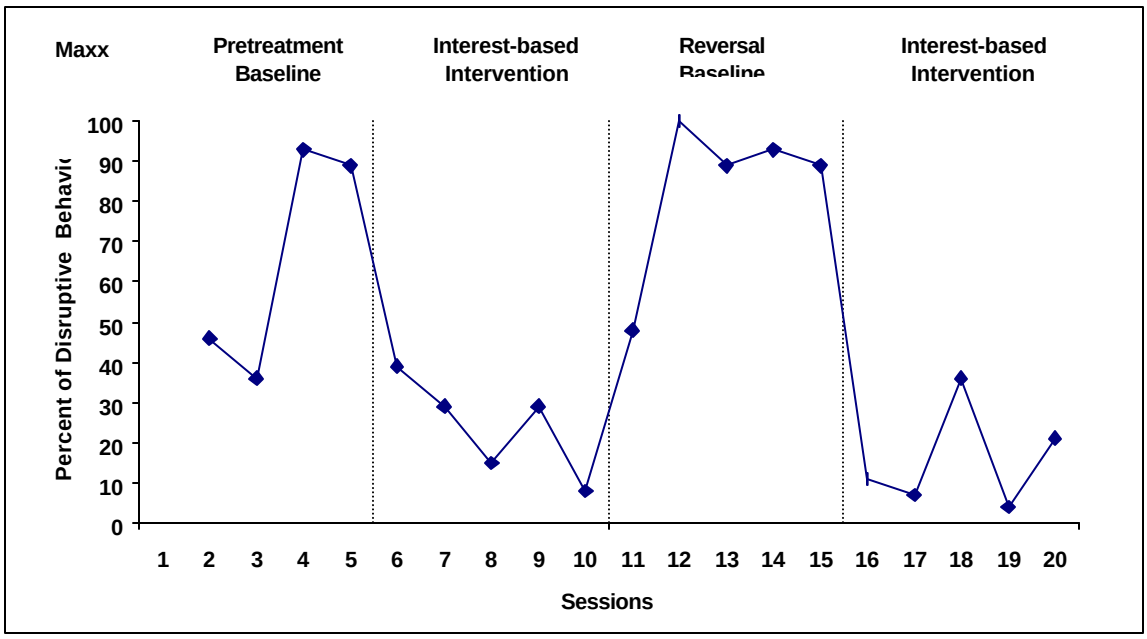


Figure 3. Results of the reversal analysis for Maxx, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments.

Stan. The mean rate of disruptive behavior for Stan during the pretreatment baseline was 60.4%. Disruptive behavior was reduced to 10.2% during the first intervention (Table 2). The second baseline was increased to 70.8% and improved dramatically to only 2.8% during the second intervention. Stan's average rate of disruptive behavior during baseline phases was 65.6% as compared to 6.5% during intervention. Stan's disruptive behaviors made the most noticeable negative increases after withdrawal of the intervention and the most positive decreases during intervention. Results of the reversal analysis for Stan, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments are shown in Figure 4.

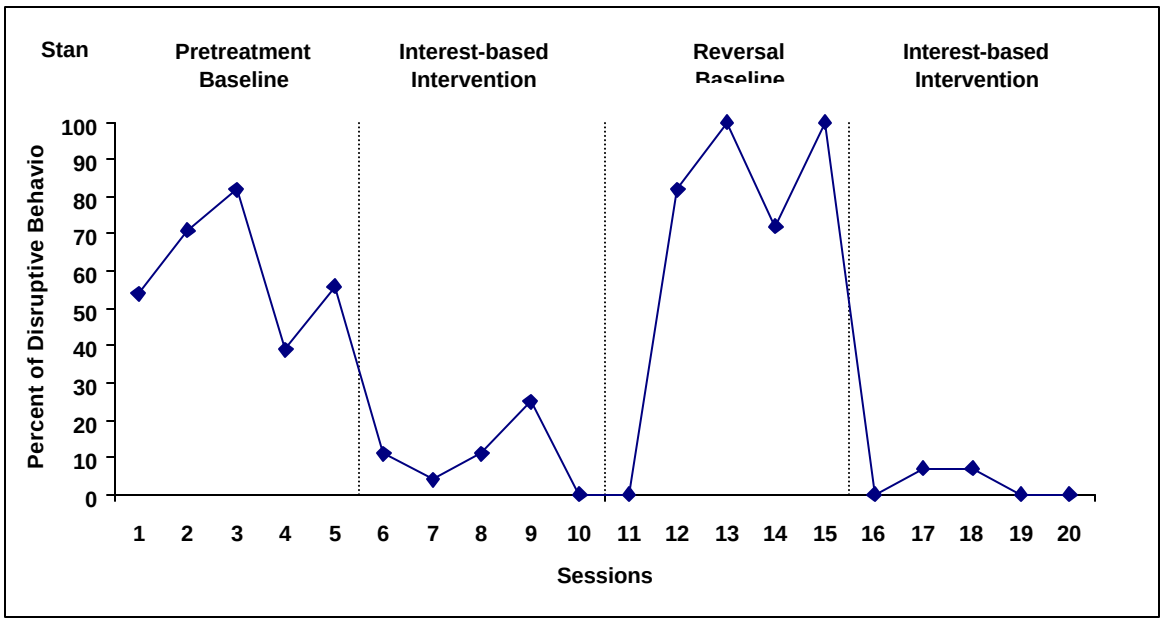


Figure 4. Results of the reversal analysis for Stan, showing percentages of disruptive behavior during the four phases of standard and interest-based assignments.

Desirable Behavior

The mean percentage rates of desirable behavior during each phase, for each participant, are presented in Table 3. Each participant showed a marked increase in desirable behavior. Brant, Maxx, and Stan showed a continued increase in desirable behavior from Phase 2 to the Phase 4. Figures 5-8 graphically depict individual participant data for desirable behavior during each phase. The dotted line represents the end of pretreatment baseline, the first intervention, and the return to baseline. The missing datapoint for Maxx indicates a one day delayed start.

Table 3

Mean Percentage of Desirable Behavior By Students During Each Phase

	Phase 1	Phase 2	Phase 3	Phase 4
Student	Pretreatment Baseline %	Interest-based Intervention %	Reversal Baseline %	Interest-based Intervention %
Brant	17	62.4	12.2	86.2
Dan	18.6	77	27.4	60.8
Maxx	34	76	17	83.4
Stan	39.4	89.8	29.2	97.2

Brant. The mean rate of desirable behavior for Brant during the pretreatment baseline was 17% (Table 3). Desirable behavior increased to 62.4% during the first intervention. Desirable behavior during the second baseline dropped to 12.2% and increased again to 86.4% during the second intervention. Brant's average rate of desirable behavior during baseline was 14.6% as compared to 74.3% during intervention. Brant's desirable behavior showed positive increases during both intervention phases and an increase from the first intervention to the second. Results of the reversal analysis for Brant, showing percentages of desirable behavior during the four phases of standard and interest-based assignments are shown in Figure 5.

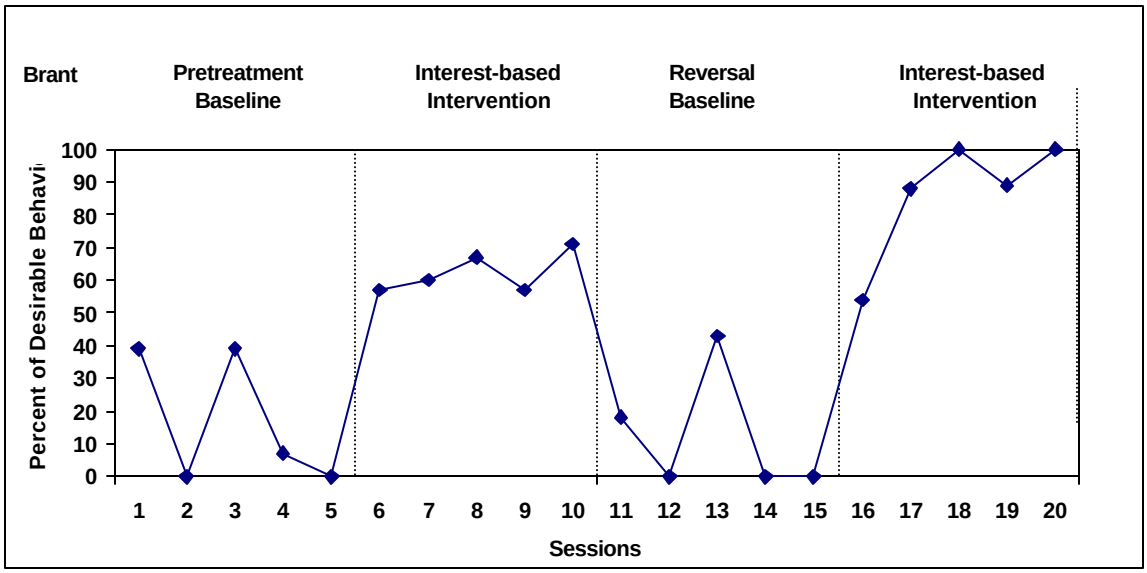


Figure 5. Results of the reversal analysis for Brant, showing percentages of desirable behavior during the four phases of standard and interest-based assignments.

Dan. The mean rate of desirable behavior for Dan during the pretreatment baseline was 18.6% (Table 3). Desirable behavior increased to 77% during the first intervention. During the second baseline, desirable behavior dropped to 27.4% and increased again to 60.8% during the second intervention. Dan's average rate of desirable behavior during baseline was 23% as compared to 68.9% during intervention. Although the most inconsistent, Dan did make considerable progress each time the intervention was introduced. Results of the reversal analysis for Dan, showing percentages of desirable behavior during the four phases of standard and interest-based assignments are shown Figure 6.

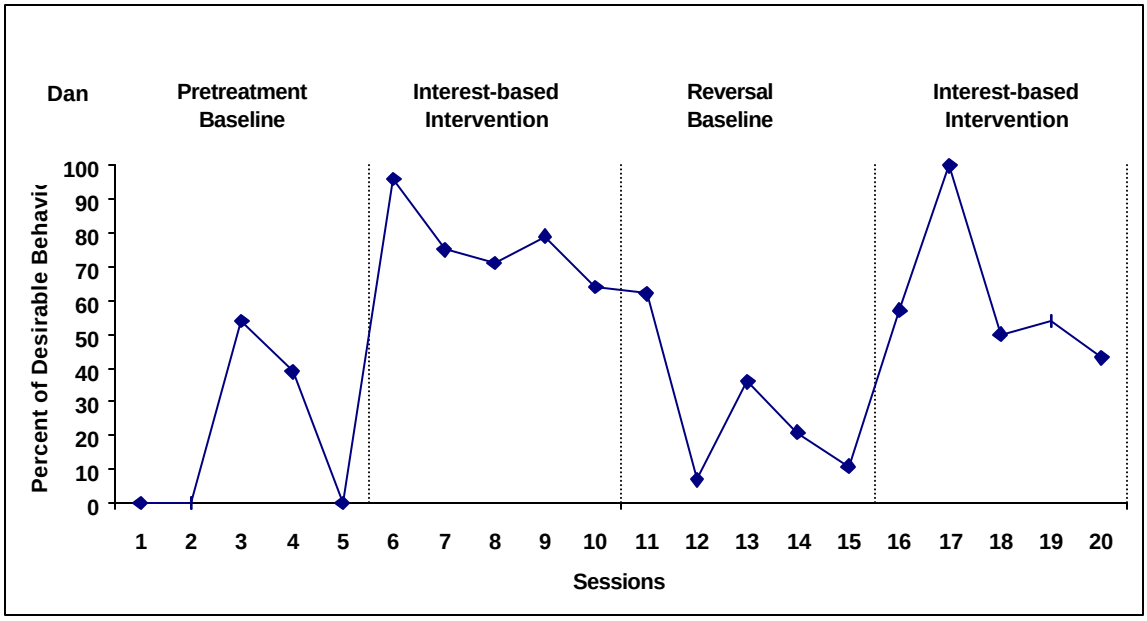


Figure 6. Results of the reversal analysis for Dan, showing percentages of desirable behavior during the four phases of standard and interest-based assignments.

Maxx. The mean rate of desirable behavior for Maxx during the pretreatment baseline was 34% (Table 3). Desirable behavior increased to 76% during the first intervention. During the second baseline, Maxx's desirable behavior rate dropped to 17% and increased again to 83.4% during the second intervention. Maxx's average rate of desirable behavior during baseline was 14.6% as compared to 79.7% during intervention. Maxx responded well to intervention and made positive gains in desirable behavior each time the intervention was introduced. Results of the reversal analysis for Maxx, showing percentages of desirable behavior during the four phases of standard and interest-based assignments are shown in Figure 7.

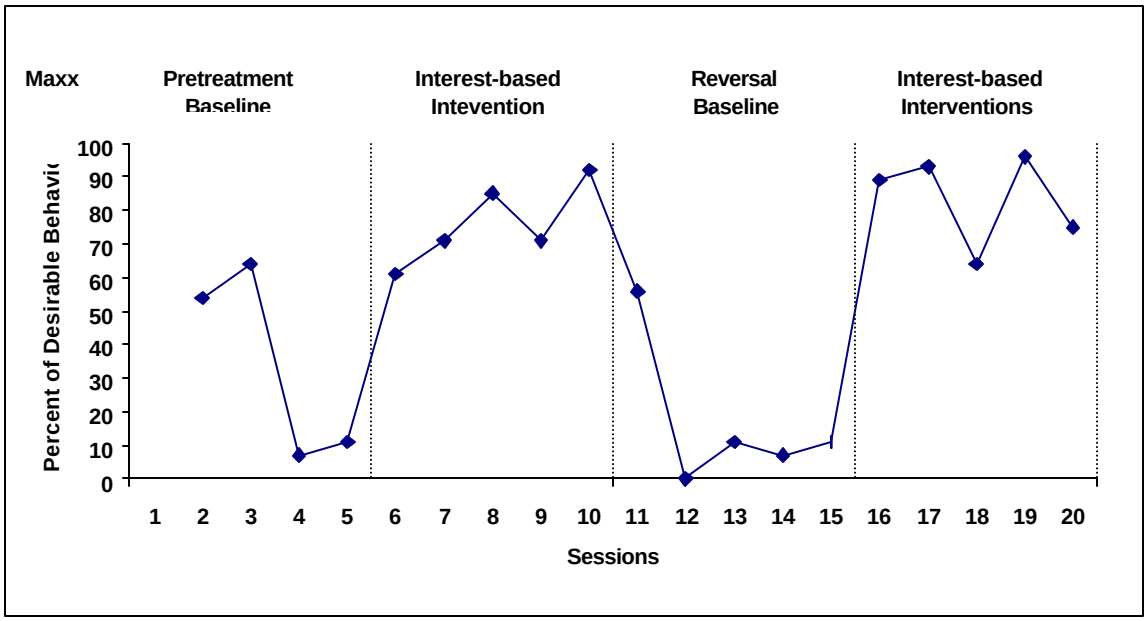
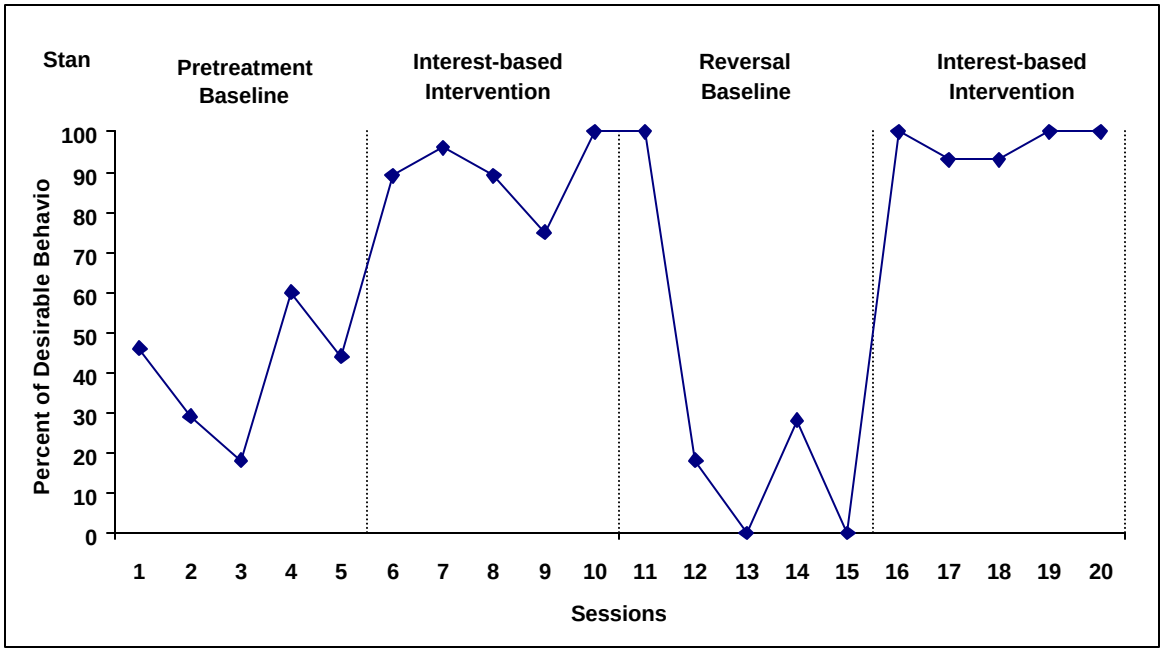


Figure 7. Results of the reversal analysis for Maxx, showing percentages of desirable behavior during the four phases of standard and interest-based assignments.

Stan. The mean rate of desirable behavior for Stan during the pretreatment baseline was 39.4% (Table 3). Desirable behavior increased to 89.8% during the first intervention. Stan's behavior during the second baseline dropped to 29.2% and increased again to 97.2% during the second intervention. Stan's average rate of desirable behavior during baseline was 34.3% as compared to 93.5% during intervention. This intervention may have been most well suited to Stan, as he displayed very high rates of desirable behavior during both intervention phases. Stan showed the biggest improvement during the second intervention. Results of the reversal analysis for Stan, showing percentages of desirable behavior during the four phases of standard and interest-based assignments are shown in Figure 8.

Figure 8. Results of the reversal analysis for Stan, showing percentages of desirable



behavior during the four phases of standard and interest-based assignments.

BDRS Results

The BDRS was given prior to the pretreatment baseline to substantiate problem areas of behavior identified in the functional behavioral assessment and reported by the teacher. A second BDRS was completed for each participant following the final phase of the intervention. Data from the pre/post BDRS are graphically presented in Figures 9-12 and Tables 4-7. The initial BDRS confirmed problem areas for each participant. Differences between the pre and post BDRS scores indicate that all four students showed progress, particularly in the areas related to targeted behaviors. Results of the BDRS yield normed T-scores (mean=50; standard deviation=10) for four subscales and a total score. Scores of less than 45 identify scores from approximately 20-44. Scores less than 45 are not indicative of problem behaviors that the BDRS was intended to identify (Bullock & Wilson, 1989). Scores falling in the 50-80+ range indicate a serious behavior problem. The four BDRS subscales are:

Subscale 1: Aggressive/Acting Out--comprising behaviors characterized by fighting, threatening, and generally being socially aggressive and hostile.

Subscale 2: Irresponsible/Inattentive--comprising Irresponsible/Inattentive patterns of interaction related to rule breaking.

Subscale 3: Socially Withdrawn-comprising behaviors manifested in solitary play, shyness, timidness, self-consciousness, reluctance, and passivity.

Subscale 4: Fearful/Anxious--comprising behaviors characterized by tenseness, anxiety, and distrustfulness.

Brant. Pretreatment scores indicate subscale 1 (Aggressive/Acting Out) and subscale 4 (Irresponsible/Inattentive) as problem behaviors. Brant's score for Aggressive/Acting Out falls into an area representing approximately 7% of the population. Irresponsible/Inattentive scores fall into an area representing only 13% of the population. All subscales except subscale 3 (Socially Withdrawn) had mean scores above the mean, signifying problem areas. Brant's post-rating scores indicate decreases in problem behavior in Aggressive/Acting Out, Fearful/Anxious, and Irresponsible/Inattentive, and (Figure 9, Table 4). The most noteworthy decrease came in subscale 2 (Irresponsible/Inattentive) where scores went from an 81.6 percentile rank to a 65.5 percentile rank. Overall, Brant's total score percentile rank improved from 69.1 to 65.5.

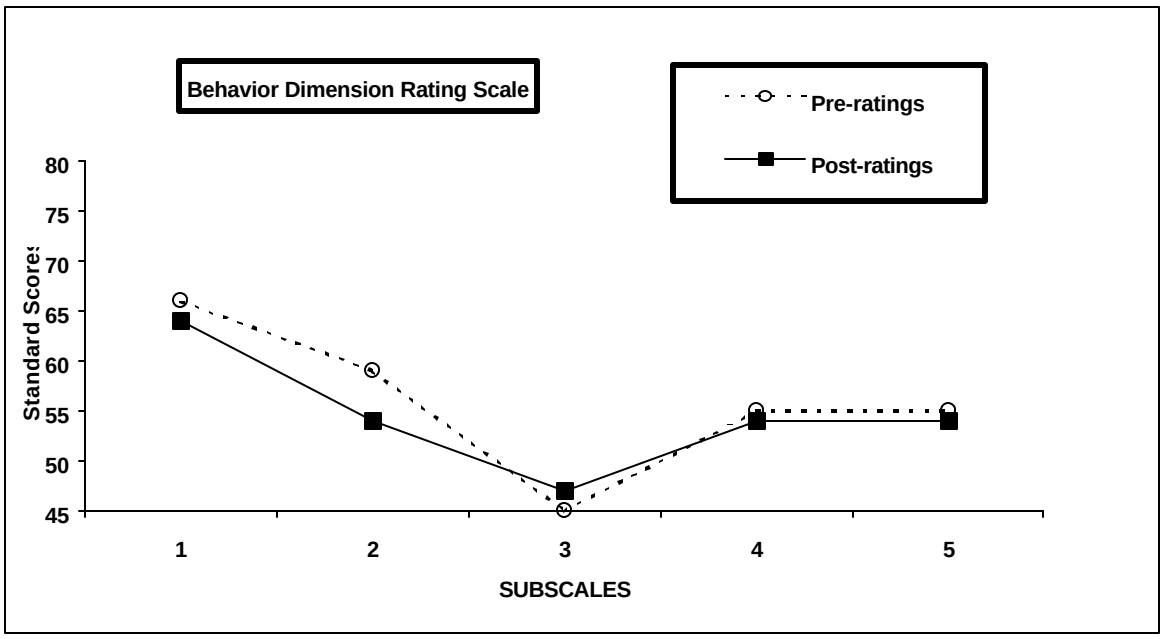


Figure 9. Brant's Pre-rating and Post-rating BDRS scores.

Subscale 1: Aggressive/Acting Out. Subscale 2: Irresponsible/Inattentive. Subscale 3: Socially Withdrawn. Subscale 4: Fearful/Anxious.

Table 4

Brant: Pre-rating and Post-rating Scores: Behavior Dimensions Rating Scale

	BDRS Scores		
Subscales	Standard Scores	Percentiles	95% Confidence Intervals (T-Scores)
Subscale 1 Aggressive/Acting Out			
Pre	66	94.5	61.7-70.3
Post	64	91.9	59.7-68.3
Subscale 2 Irresponsible/Inattentive			
Pre	59	81.6	53.5-64.5
Post	54	65.5	48.5-59.5
Subscale 3 Socially Withdrawn			
Pre	45	30.9 & below	38.5-51.5
Post	47	38.2	40.5-53.5
Subscale 4 Fearful/Anxious			
Pre	55	69.1	48.5-61.5
Post	54	65.5	47.5-60.5
Total Scaled Score			
Pre	55	69.1	50.3-59.7
Post	54	65.5	49.3-58.7

Dan. Pretreatment scores indicate some problems in all four subscale areas. All subscales had mean scores above the mean, signifying problem areas. Dan's total scaled score of 59 and percentile rank of 81.6 fell into an area representing approximately 13% of the population. Dan's post-rating scores indicate moderate improvement in Aggressive/Acting Out, Fearful/Anxious, Irresponsible/Inattentive, and the total score (Figure 10, Table 5). Subscale 1 (Aggressive/Acting Out) dropped from the 69.1 percentile rank to 46.0, falling below the mean of 50. Subscale 2 (Irresponsible/Inattentive) went from a 78.7 percentile rank to a 62.8. The total rating scale indicated overall improvement and increased from an 81.8 percentile rank to 61.8.

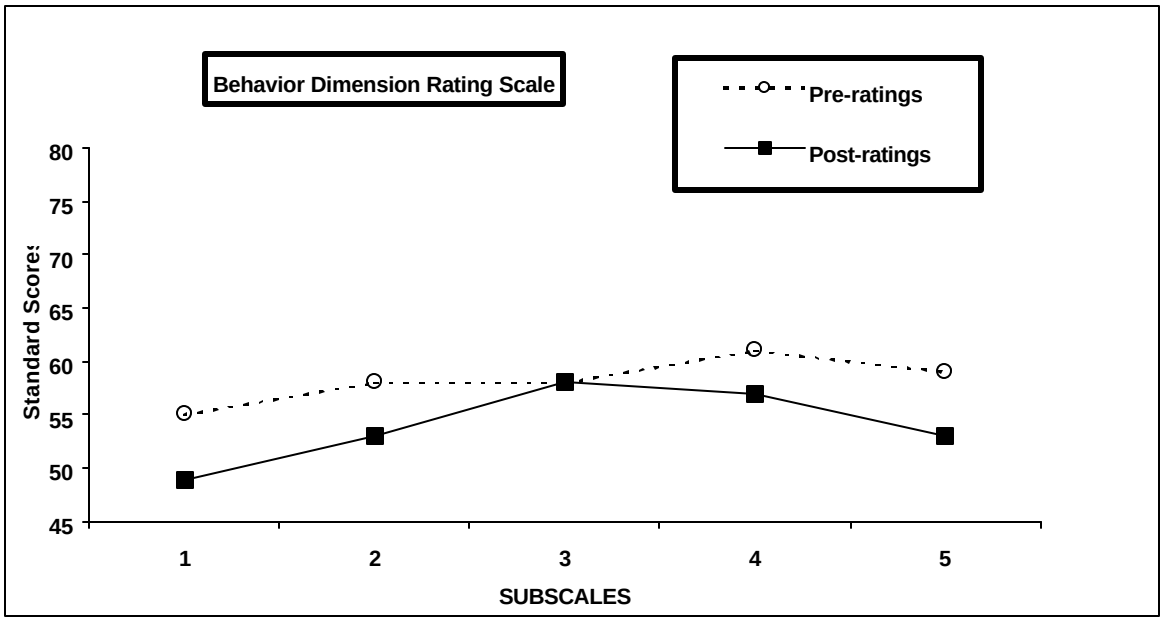


Figure 10. Dan's Pre-rating and Post-rating BDRS scores.

Subscale 1: Aggressive/Acting Out. Subscale 2: Irresponsible/Inattentive. Subscale 3: Socially Withdrawn. Subscale 4: Fearful/Anxious.

Table 5

Dan: Pre-rating and Post-rating Scores: Behavior Dimensions Rating Scale

	BDRS SCORES		
Subscales	Standard Scores	Percentiles	95% Confidence Intervals (T-Scores)
Subscale 1 Aggressive/Acting Out			
Pre	55	69.1	50.7-59.3
Post	49	46.0	44.7-53.3
Subscale 2 Irresponsible/Inattentive			
Pre	58	78.8	52.1-63.9
Post	53	61.8	47.1-58.9
Subscale 3 Socially Withdrawn			
Pre	58	78.8	51.5-64.5
Post	58	78.8	51.5-64.5
Subscale 4 Fearful/Anxious			
Pre	61	86.4	54.1-67.9
Post	57	75.8	50.1-63.9
Total Scaled Score			
Pre	59	81.6	54.3-63.7
Post	53	61.8	48.3-57.7

Maxx: Pretreatment scores indicate problem areas in subscale 1(Aggressive/Acting Out) and subscale 2 (Irresponsible/Inattentive). Scores and percentile ranks on both, fall into an area represented by about 20% of the population. Although there was no change in subscale 1 (Aggressive/Acting Out), Maxx's post rating scores do indicate improvement in subscales 2 (Irresponsible/Inattentive) and 4 (Fearful/Anxious) (Figure 11, Table 6). Subscale 2 (Irresponsible/Inattentive) dropped from a 61.8 percentile rank to 50.0. Subscale 4 (Fearful/Anxious) went from 46.0 to 38.2.

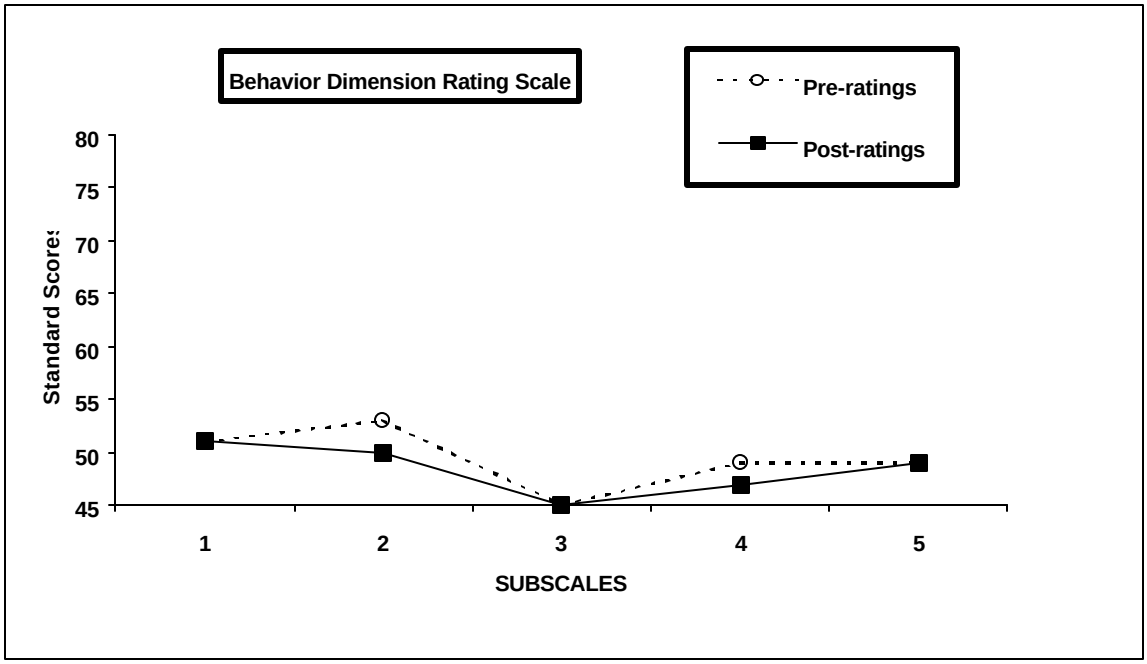


Figure 11. Maxx's Pre-rating and Post-rating BDRS scores.

Subscale 1: Aggressive/Acting Out. Subscale 2: Irresponsible/Inattentive. Subscale 3: Socially Withdrawn. Subscale 4: Fearful/Anxious.

Table 6

Maxx: Pre-rating and Post-rating Scores: Behavior Dimensions Rating Scale

	BDRS SCORES		
Subscales	Standard Scores	Percentiles	95% Confidence Intervals (T-Scores)
Subscale 1 Aggressive/Acting Out			
Pre	51	54.0	46.7-55.3
Post	51	54.0	46.7-55.3
Subscale 2 Irresponsible/Inattentive			
Pre	53	61.8	47.5-58.9
Post	50	50.0	44.5-55.5
Subscale 3 Socially Withdrawn			
Pre	<45	30.9 & Below	38.5-51.5
Post	<45	30.9 & Below	38.5-51.5
Subscale 4 Fearful/Anxious			
Pre	49	46.0	42.5-55.5
Post	47	38.2	40.5-53.5
Total Scaled Score			
Pre	49	46.0	44.3-53.7
Post	49	46.0	44.3-53.7

Stan: Pretreatment scores indicate problems in subscale 2 (Irresponsible/Inattentive) and subscale 3 (Socially Withdrawn). Scores and percentile ranks on both subscales fall into an area represented by about 20% of the population. Stan's post-rating profile points to improvement in all areas and the total score (Figure 12, Table 7). Most notably, percentile ranks dropped from 57.9 to 46.0 in subscale 2 (Irresponsible/Inattentive) and from 69.1 to 61.8 in subscale 3 (Socially Withdrawn). Improvements were also evident in subscale 1 (Aggressive/Acting Out) and subscale 4 (Fearful/Anxious).

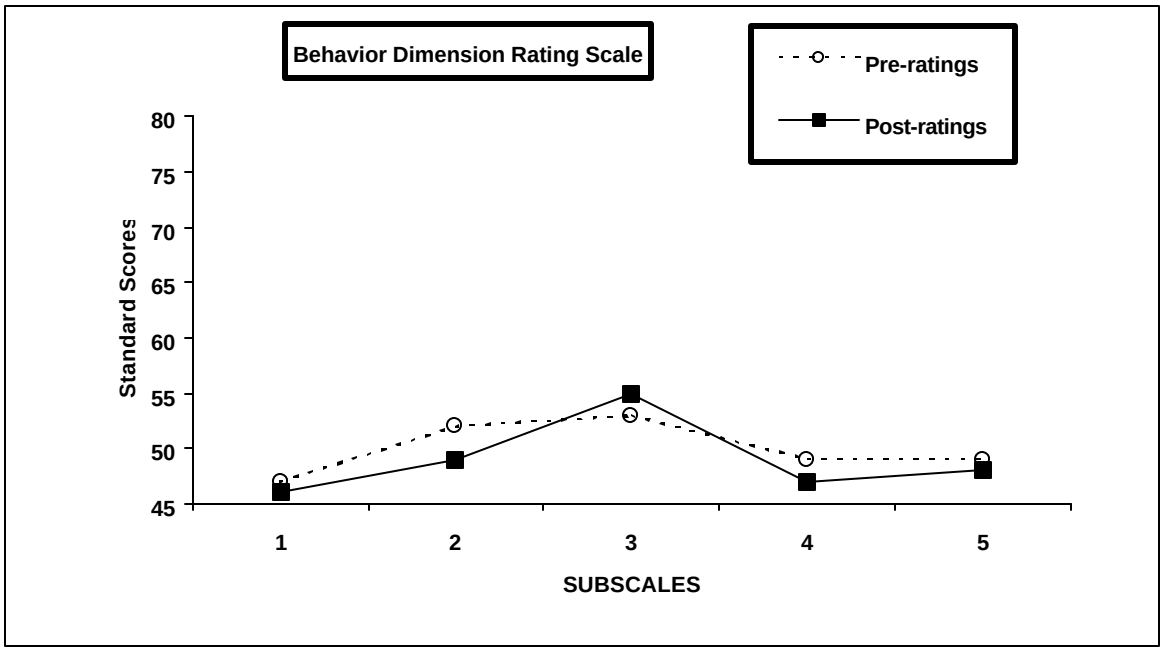


Figure 12. Stan's Pre-rating and Post-rating BDRS scores.

Subscale 1: Aggressive/Acting Out. Subscale 2: Irresponsible/Inattentive. Subscale 3: Socially Withdrawn. Subscale 4: Fearful/Anxious.

Table 7

Stan: Pre rating and Post-rating Scores: Behavior Dimensions Rating Scale

Subscales	BDRS SCORES		
	Standard Scores	Percentiles	95% Confidence Intervals (T-Scores)
Subscale 1 Aggressive/Acting Out			
Pre	47	38.2	42.7-51.3
Post	46	34.5	41.7-50.3
Subscale 2 Irresponsible/Inattentive			
Pre	52	57.9	46.5-57.5
Post	49	46.0	43.5-54.5
Subscale 3 Socially Withdrawn			
Pre	53	61.8	46.5-59.5
Post	55	69.1	48.5-61.5
Subscale 4 Fearful/Anxious			
Pre	49	46.0	42.5-55.5
Post	47	38.2	40.5-53.5
Total Scaled Score			
Pre	49	46.0	44.3-53.7
Post	48	42.1	43.3-52.7

Motivation Assessment Scale

The MAS was given prior to the pretreatment baseline to identify motivational factors for specific behaviors. A second MAS was completed for each participant following the final phase of the intervention. Data from the pre/post MAS are presented in Tables 8-1 and Figures 13-1. Pre and post scores for each participant were calculated using a total score, mean score, and relative ranking. Scores on the MAS were used to determine influences on behavior and motivation of specific behavior in a variety of situations. The 16 items are organized into four categories of reinforcement (Durand & Crimmins, 1992):

Category 1: Social Attention motivation -- comprised of behaviors that result in positive attention. These behaviors could indicate that too little attention is available.

Category 2: Tangible motivation -- comprised of behaviors displayed to gain tangible items (e.g., food, toys, activities, personal items). These behaviors may occur when reasonable requests are being ignored.

Category 3: Escape motivation -- comprised of behaviors designed to disrupt in order to avoid or escape. These behaviors could indicate things may be too demanding (i.e., the work may be too difficult) or too sterile (boring) and, therefore, uninteresting.

Category 4: Sensory motivation -- comprised of self-stimulatory behaviors that provide sensory feedback. These behaviors could indicate lack of stimulation in the environment.

Brant: Target behavior was avoiding work by distracting others. Pre-rating scores on the MAS indicate Brant's motivation for disruptive behaviors was to gain attention, which ranked number one in relative ranking. His post-rating scores all dropped with the total score for the Social Attention category dropping from 21 to 12 and the mean score dropping from 3.50 to 2.50 (Table 8, Figure 13). .Sensory dropped from 16 to 13, Escape dropped from 17 to 14, and Tangible dropped from 20 to 18. Social Attention remained the number one ranked motivation.

Table 8

Brant: Pre-rating and Post-rating Scores: Motivation Assessment Scale

	MAS Scores		
Subscales	Total Score	Mean Score	Relative Ranking
Subscale 1 Sensory			
Pre	16	4.00	4
Post	13	3.25	4
Subscale 2 Escape			
Pre	17	4.25	3
Post	14	3.50	3
Subscale 3 Attention			
Pre	21	5.25	1
Post	20	5.00	1

Subscale 4 Tangible			
Pre	20	5.00	2
Post	18	4.50	2

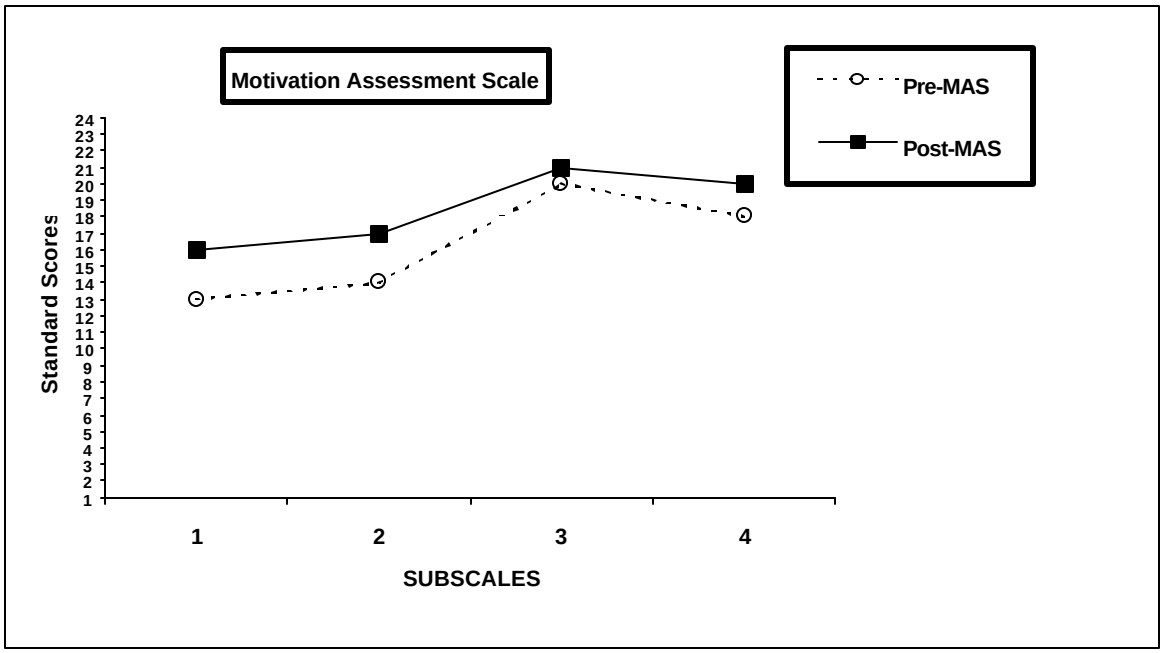


Figure 13. Brant's Pre and Post MAS Scores.

Category 1: Social Attention. Category 2: Tangible. Category 3: Escape. Category 4: Sensory.

Dan: Target behavior was avoiding work by getting out of seat and talking. Pre-rating scores on the MAS indicate Dan's motivation for disruptive behaviors was to gain something tangible. The Tangible category was number one in relative ranking. His post-rating total score for the Tangible dropped from 18 to 16 and the mean score dropped from 4.50 to 4.00 (Table 9, Figure 14). Scores in all remaining categories dropped as

well. Sensory dropped from 16 to 14, Escape dropped from 15 to 12, and Social Attention dropped from 14 to 5. The Tangible category remained the number one ranked motivation for disruptive behavior throughout the study.

Table 9

Dan: Pre-rating and Post-rating Scores: Motivation Assessment Scale

	MAS Scores		
Subscales	Total Score	Mean Score	Relative Ranking
Subscale 1 Sensory			
Pre	15	4.00	2
Post	14	3.50	2
Subscale 2 Escape			
Pre	15	3.73	3
Post	12	3.00	3
Subscale 3 Attention			
Pre	14	3.50	4
Post	5	1.25	4
Subscale 4 Tangible			
Pre	18	4.50	1
Post	16	4.00	1

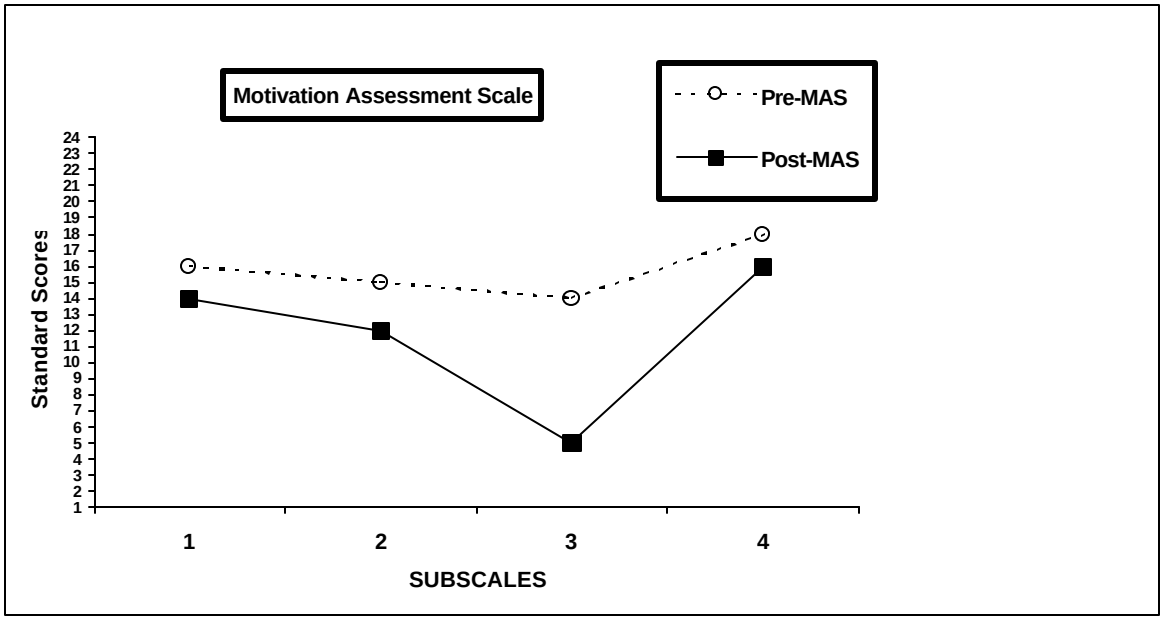


Figure 14. Dan's Pre and Post MAS Scores.

Category 1: Social Attention. Category 2: Tangible. Category 3: Escape. Category 4: Sensory.

Maxx: Target behavior was avoiding work by wasting time at the beginning of an assignment. Pre-rating scores on the MAS indicate Maxx's motivation for disruptive behaviors was sensory in nature. The Sensory category was number one in relative ranking. His post-rating total score for the Sensory category dropped from 15 to 12 and the mean score dropped from 3.75 to 3.00 (Table 10, Figure 15). Scores in two of the four categories dropped, indicating a shift in motivation. There was also a slight rise in two others, which confirmed a shift in motivation. The Escape subscale rose from 10 to 11, Social Attention rose from 8 to 11, and Tangible dropped from 12 to 11. For Maxx, the Sensory category remained the number one ranked motivation category for disruptive behavior throughout the study.

Table 10

Maxx: Pre-rating and Post-rating Scores: Motivation Assessment Scale

	MAS Scores		
Subscales	Total Score	Mean Score	Relative Ranking
Subscale 1 Sensory			
Pre	15	3.75	1
Post	12	3.00	1
Subscale 2 Escape			
Pre	10	2.50	3
Post	11	2.75	T2
Subscale 3 Attention			
Pre	8	2.00	4
Post	11	2.75	T2
Subscale 4 Tangible			
Pre	12	3.00	2
Post	11	2.27	T2

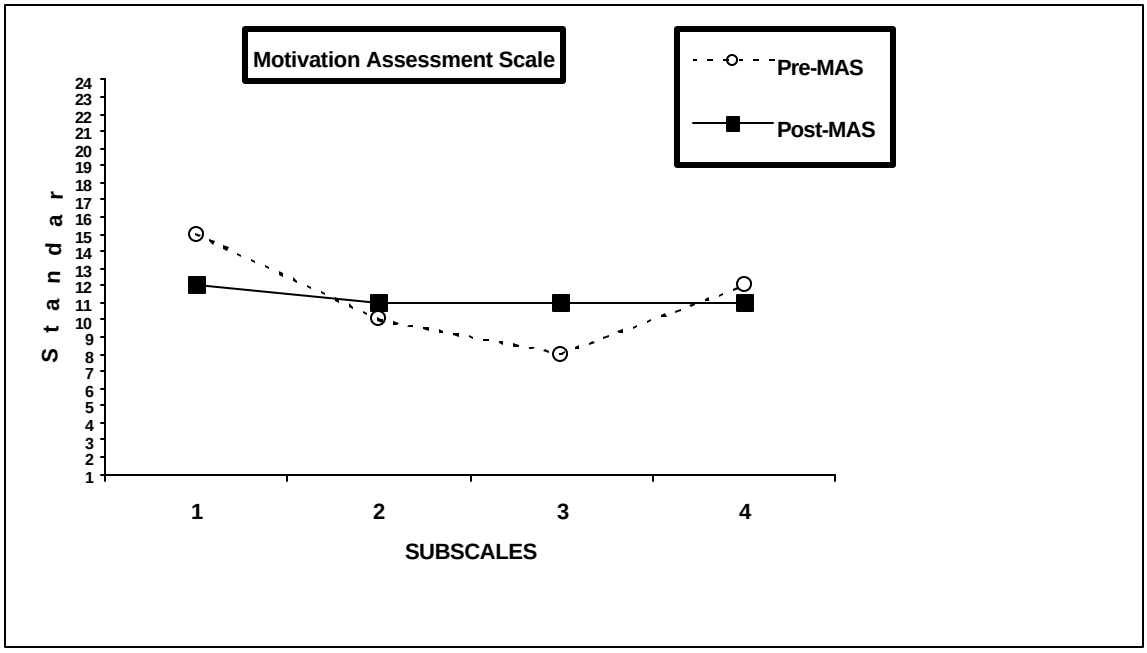


Figure 15. Maxx's Pre and Post MAS Scores.

Category 1: Social Attention. Category 2: Tangible. Category 3: Escape. Category 4: Sensory.

Stan: Target behavior was avoiding work by sitting and staring. Pre-rating scores on Stan's MAS indicate his motivation for disruptive behaviors was sensory in nature. The Sensory category was number one in relative ranking. His post-rating total score for the Sensory category dropped from 13 to 8 and the mean score dropped from 3.25 to 2.00 (Table 11, Figure 16). The Escape category dropped from 10 to 6 and the attention category dropped from 9 to 7. The Sensory category was replaced by the Tangible category which rose from 8 to 12 and emerged as the number one ranked motivation. The success of this intervention may be attributed to the sensory nature of the adaptations that appealed to Stan. His motivation for doing work remained sensory, yet his motivation for

disruptive shifted as a result of the intervention. Three categories changed in relevance ranking, indicating a complete shift in motivation.

Table 11

Stan: Pre-rating and Post-rating Scores: Motivation Assessment Scale

	MAS Scores		
Subscales	Total Score	Mean Score	Relative Ranking
Subscale 1 Sensory			
Pre	13	3.25	1
Post	8	2.00	2
Subscale 2 Escape			
Pre	10	2.50	2
Post	6	1.50	4
Subscale 3 Attention			
Pre	9	2.25	3
Post	7	1.25	3
Subscale 4 Tangible			
Pre	8	2.00	4
Post	12	3.00	1

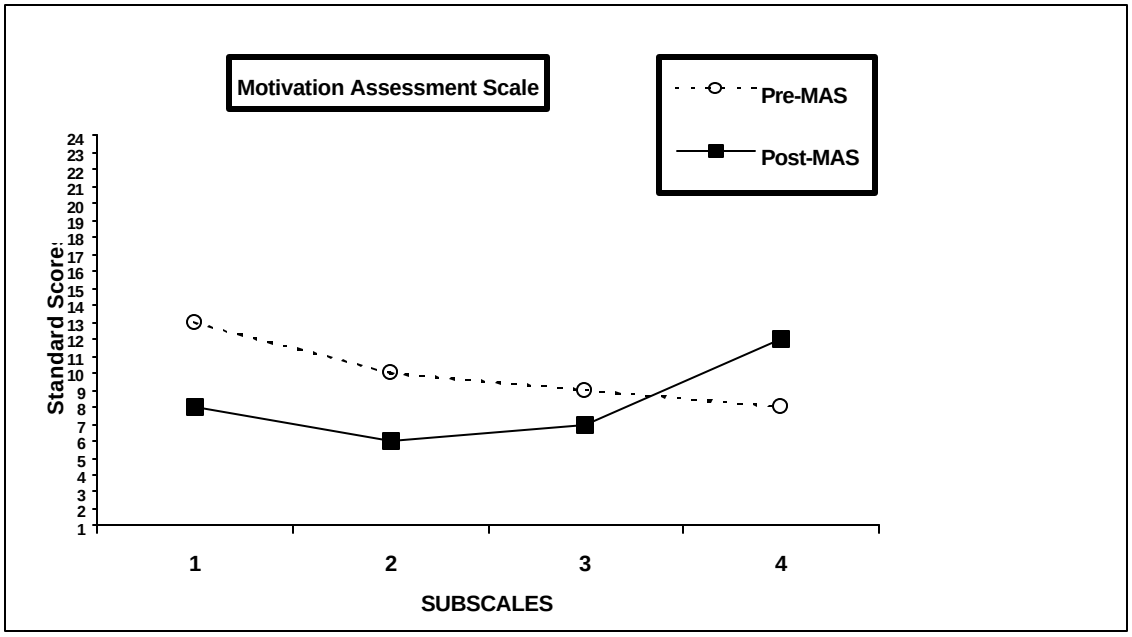


Figure 16. Stan's Pre and Post MAS Scores.

Category 1: Social Attention. Category 2: Tangible. Category 3: Escape. Category 4: Sensory.

Discussion

In this study, curricular adaptations were developed for the purpose of decreasing disruptive behavior, increasing desirable behavior, and affecting change in the behavior motivation of students. The focus of the intervention was on a proactive instructional strategy, utilizing student interest, used to promote desirable behavior and reduce disruptive behavior in the educational context (Clarke et al., 1995).

Results of this study were used to answer the research questions:

Research Question 1. Do individualized, curricular accommodations developed according

to student interest, have an impact on the occurrence of disruptive behaviors, as measured by an ABAB reversal design analysis? Yes, data revealed that curricular adaptations based on student interest were effective in decreasing the occurrence of disruptive behavior.

Research Question 2. Do individualized, curricular accommodations developed according to student interest, have an impact on the nonoccurrence of disruptive behaviors as measured by an ABAB reversal design analysis? Yes, data revealed that curricular adaptations based on student interest were effective in increasing the nonoccurrence of disruptive behavior.

Research Question 3. Do individualized, curricular accommodations developed according to student interest, have an effect on the occurrence of desirable behaviors as measured by an ABAB reversal design analysis? Yes, data revealed that curricular adaptations based on student interest were effective in increasing the occurrence of desirable behavior.

Research Question 4. Do individualized, curricular accommodations developed according to student interest, have an effect on the nonoccurrence of desirable behaviors as measured by an ABAB reversal design analysis? Yes, data revealed that curricular adaptations based on student interest were effective in decreasing the nonoccurrence of desirable behavior.

Research Question 5. Do individualized, curricular accommodations developed according to student interest, have an effect on motivation of student behavior as measured by the Motivation Assessment Scale (MAS; Durand & Crimmins, 1992)? Yes, data indicated

that in some instances, the degree of motivation decreased, while in some instances, the motivation for behavior changed all together.

Overall, results suggest that curricular adaptations based on student interest offer an effective, proactive alternative to traditional, punitive behavior management strategies used with students with E/BD. Specifically, this study demonstrated that curricular adaptations based on student interest were effective in decreasing the occurrence of disruptive behavior, increasing the occurrence of desirable behavior, and effecting the motivation for displaying disruptive behavior, thereby impacting the motivation for desirable behavior. All students participating in the study demonstrated a decrease in levels of disruptive behavior and an increase in levels of desirable behavior.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

This study employed a single subject, ABAB reversal design to measure the effectiveness of curricular adaptations based on student interest. Research was carried out to add to the literature base investigating the manipulation of antecedent stimuli through the implementation of individualized, curricular adaptations, based on student interest. Specifically, this study attempted to extend the research to include students with Emotional/Behavioral disorders (E/BD). A second purpose was to explore the effect of those adaptations on the behavior motivation of students with E/BD. This chapter includes: (a) summary, (b) implications, and (c) recommendations.

Summary

The manipulation of antecedent stimuli, such as instructional and curricular variables, used as a positive behavior support and in opposition to traditional intrusive measures has been suggested in recent research (Dunlap & Kern, 1993; Fuchs, Fuchs, & Bishop, 1992). Only recently have researchers begun to conducted research in this area and extended it to include students with E/BD (e.g., Carr et al., 1994; Clarke et al., 1995; Dunlap, et al., 1993; Dunlap et al., 1991; Kern, Childs, Dunlap, Clarke, & Falk, 1994). This current study extends current research to include students with E/BD.

Data from this study indicating decreases in disruptive behavior and increases in desirable behavior, coupled with positive student and teacher reactions, suggests that

curricular adaptation utilizing student interest is an effective positive classroom behavioral intervention.

Results demonstrated that the problem behavior of elementary students with E/BD can be reduced and desirable behavior can be increased, in some cases, dramatically, when individualized curricular adaptations, based on student interest, are applied to existing curricula.

When using student reported interest, all four students in this study demonstrated observable behavioral improvements during intervention phases. For all four, access to interesting assignments as the only intervention, improved behavior.

Implications

The findings of this study are meaningful because they not only extend the current literature related to instructional strategies, but also contribute to the paucity of effective behavioral interventions used with students displaying E/BD. The positive results of this study have practical and diverse implications for teachers. Interest-based instructional strategies have implications for communication, lesson planning, and behavioral interventions, and individualization.

It is well documented that students with E/BD require individualized interventions that are specially designed (Sprague, Sugai, & Walker, 1998; Sugai & Colvin, 1997). This study provides a stand alone intervention that is specially designed for each student as modifications were made solely based on individual student interest. In addition, an alternative is provided to the intense, intrusive procedures long believed needed to manage behavior problems (Clarke, et al., 1995). Programs for students with

E/BD have relied heavily on extrinsic rewards and punishment (Knitzer et al., 1990). The focus has not been on internal and external determinants, but on the characteristics of the behavior (Gable, 1996). This study focused specifically on internal and external determinants having an effect on motivation and behavior.

The use of interest can be a tool effectively used to motivate and reinforce learning and to provide tasks which are relevant to the student (Hammill, 1987; Stipek, 1998), while helping to ameliorate behavior problem (Clarke et al., 1995; Cooper et al., 1992).). Interest can serve two roles in the influence of motivational choices (Middleton & Toluk, 1999) and can allow the student to decide whether engagement in the task is worthwhile. Motivational deficits have obvious and critical implications for the academic progress of students (Anderman & Midgley, 1998). When students are motivated, communication increases, anxiety decreases, and discipline problems decrease (Wlodkowski, 1984, 1999). Results from this study show that not only is motivation related to interest and engagement in tasks, but that the motivation for behavior can be changed and effected positively using interest of the student. When teachers begin to understand the motivation for behavior, effective interventions can then be developed.

Recommendations

Further research needs to be conducted on the manipulation of antecedent stimuli, specifically curricular adaptation using student interest. This research should be targeted at students with E/BD, thus adding to the modest literature base.

The capacity to select and modify interventions to meet individual needs may not be well established (Sugai & Colvin, 1997), yet we know teachers are more likely to try

new interventions when the perceived change is not disruptive and is likely to be effective (Martens, Peterson, Witt, & Cirone, 1986). Instructional modifications based on student interest were a relatively simple strategy to implement, were not perceived by the teacher to be obtrusive in any way and were seen as an effective intervention. Why educators often resist this type of empirically validated, sound practices, is yet unknown (Walker et al., 1998). For this reason, further research should investigate the perception of and impact on the classroom teacher as the person making the curricular adaptations.

There remains a need for further research that will influence intervention and instructional practices within the field of E/BD. Despite the proven effectiveness of the strategy used in this study, the durability over a long period of time is not known. Research is warranted to study these long-term effects.

The procedures in this study allowed for the assessment of behavior under existing self- contained classroom conditions. Future studies may want to determine whether or not this procedure is feasible in general education classrooms including students with E/BD. Results from this study empirically bolster theoretical trends and legislative mandates calling for positive alternatives to traditional behavioral and instructional strategies for students with E/BD.

APPENDIX A

PERMISSION FORMS

AISD

SPECIAL EDUCATION
PROGRAM COORDINATORS OFFICE
2020 WEST TUCKER BLVD. ARLINGTON, TEXAS 76013 * (817)801-2333
FAX (817)801-2302

February 22, 2001

Teresa L. Teaff
Doctoral Leadership Program in Behavioral Disorders
University of North Texas
P.O. Box 311337
Denton, TX 76203-3337

Dear Ms. Teaff:

I have received your request to conduct a research study with some of the students assigned to Dunn elementary.

We would be happy to participate in this study with you. We look forward to gaining more information to help our students be more successful.

Please contact me to set up the initial meeting with the --- teachers. (817- -------)

Sincerely,

Vicki McCall

Vicki McCall
PASS Program Coordinator

APPENDIX B

TEACHER REFERRAL

INFORMAL INTERVIEW GUIDE

Teacher Referral
Informal Interview

Inability to maintain task engagement
Talking out without staff permission
Excessive off task behavior
Noncompliance
Inability to complete assignments
Disruptive behavior - when a student exhibits one of the listed behaviors which interferes with classroom activities

1. Think about the listed behaviors.

2. Do you have any students which display any one of these behaviors consistently?

3. Please think about specific students.

4. Is it possible that any of the behaviors are motivated by escape, avoidance, or to get something?

5. Please list students which you think would be good candidates to participate and could benefit from the study.

6. List as many of your students as you think are necessary.

Names	Grade	Observed Behaviors

APPENDIX C

INTERVAL DATA RECORDING SHEET

INTERVAL SYSTEM DATA RECORDING SHEET
DISRUPTIVE/DESIRABLE BEHAVIORS

Student:_____ Date:_____

Observer:_____ Time Start:_____ Time End:____

Target Behavior: Disruptive Behavior
Target Behavior: Desirable Behavior
O=occurrence X= Non Occurrence

	Disruptive 10-second interval					**Desirable** 10-second interval				
Minutes										

Comments:

_____

APPENDIX D

STUDENT INFORMAL INTEREST INVENTORY

Student Interest

Informal Interview Form

Student:_____ Date: _____

1. Who or what is your favorite:

Movie:_____ Videogame:_____

T. V. show:_____ Cartoon:_____

Singer: _____ Book/comic:_____

Kind of music:_____ Food:_____

Candy: _____ Snack food: _____

Color: _____ Animal: _____

2. What is your favorite sport?_____

3. Who is your favorite team?_____

4. Who is your favorite player?_____

5. If you could bring any magazine to school, what would it be?(appropriate)_____

6. Do you collect anything? _____

7. What do you like to do in your free time?

_____

8. Do you ever go on the Internet? If so, what do you like to do?_____

9. What is fun to you?_____

10. If you could buy anything you wanted, what would it be?_____

11. What would you buy in the toy store? _____

12. What is your favorite toy? _____

13. Do you have a pet? Tell me about it._____ like animals?_____

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